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Mac ADDICT 1

premiere

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See pages 8, 18, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51.

28 Reviews
Check this stuff out

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WOW! It screams!

The OpenDoc Revolution
This ain't no evolution

25 Ways a Mac is Better Than a PC
(But you knew that)

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Win a custom-painted Power Mac! It's really easy. We swear. See page 9.

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September 1996

Mac ADDICT 1

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Cover image produced by Tom White of Tom White.Images, a New York City-based studio specializing in digital imaging, illustration and design for all media.

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Create stunning out-of-this-world terrains with Bryce 2.

every month

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Woo-hoo! We got the first issue out!

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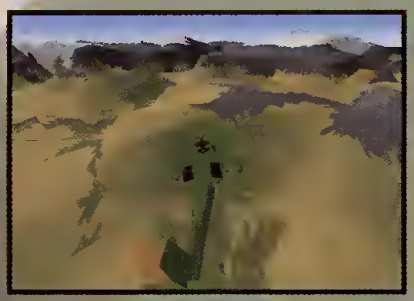

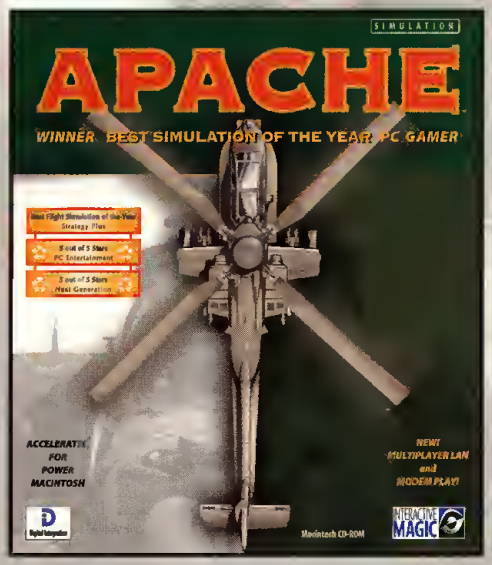

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editor's note

Why, in these days of Apple's losses and layoffs, are we launching this magazine? Because, believe it or not, it's a good idea.

Are we crazy to launch this magazine in these seemingly dark times for the Mac? A lot of people may say we are.

No one seems to have anything nice to say about Apple anymore. Media doomsayers and Wall Street know-nothings predict that Apple will either die or devolve into irrelevance. We disagree. To these people we say, the Mac isn't going anywhere and we're living proof.

As its name implies, MacAddict is for people who are passionate about their Power Macs, Quadras, Performas, PowerBooks and even their little Mac Classics that sit forlornly in a closet. (They're still so endearing in design that some of us just can't abandon them, even if we don't actually use them anymore). MacAddict is for people who want to use their Mac to its full potential, whether that's finding every hidden nook in Marathon 2, creating goofy QuickTime movies or counterfeiting the new hundred dollar bills (not that we would ever condone that, of course).

That's why you'll see lots of hands-on tutorials, step-by-step instructions and tips and hints in the pages of MacAddict. As a matter of fact, even our reviews include pointers on how to use products more efficiently. When we write about new technologies, we'll do more than just explain how they affect the way you work with your Mac—we'll show you with lots of big, bold screen shots and illustrations. Take a look at page 36 for our story on OpenDoc, the technology that foreshadows where Apple is taking the Mac OS.

You'll see lots of hands-on tutorials and tips and hints in the pages of MacAddict. We won't just illustrate technology, we'll also put it in your hands.

We won't just illustrate technology, we'll also put it in your hands. Every issue of MacAddict includes The Super Phat Disc, a custom-made CD-ROM that comes bursting with shareware, resources, demos, essential system software and tutorials. You'll be able to read an article in the magazine on, say, how to create a fake photo (see page 78), sit down at your Mac, pop in The Super Phat Disc and gain instant access to the tools you need to work through the tutorial. Read a review of a hot new game such as, Bad Mojo (see page 55) and then pop in the CD-ROM and really get the willies from a creepy QuickTime preview. Think about it—in just six months, you'll have over 3GB of software and tutorials. We'll even include some hidden goodies for you to discover each month—things like stupid video tricks, contests and jokes.

And, of course, we have a Web site. Who doesn't these days? When you stop by to visit us at http://www.macaddict.com you'll be greeted with a startling purple and green background bright enough to scare your dog. Because we recognize that most of you will be coming to us via 28.8 Kbps modems, we promise that our site won't contain graphics larger than 10K. Our Web site has a clubhouse atmosphere where you can visit to ask questions, offer advice, talk back to us and chat with other readers. We'll post late-breaking news and provide links to the best online resources for Mac afficionados. In addition to finding links to article-related resources, you'll also find exclusive online material, including our rants and random thoughts, full interview transcripts and behind-the-scenes peeks at the industry, the magazine and the MacAddict staff.

Oh, and by the way, when you pop in The Super Phat Disc you will access up-to-the-minute Apple news on the Web site via Live Wire. With The Disc in place, you'll also get snazzy, albeit gratuitous, animations on the Web page instead of mere 10K stills. To find out more about what's on The Disc and The Web Site, turn to page 14—the cool-looking black pages—for a Super Phat sneak preview.

But don't stop there. Get Info on the latest Mac happenings, drool over the most seductive Cravings, giggle over the back page and help us convert one PC user at a time to the Mac way (see page 22). And these tidbits are only for starters.

When you're through, feel free to tell us what you think. If you have suggestions for us or a story to tell, don't hesitate to send those e-mails to us at letters@macaddict.com or post your old-fashioned paper-based letters to Cheryl England, Editor-in-Chief, MacAddict, 150 North Hill Drive, Brisbane, CA 94005. We want you to get as much joy out of your Macs as we do out of ours.

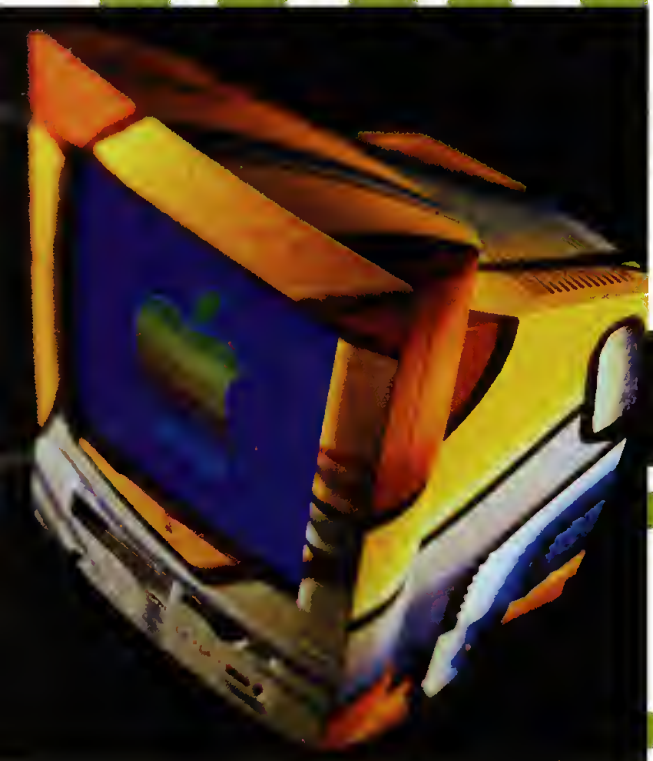
—Cheryl England

A Thousand Thank Yous

A lot of folks helped make MacAddict real. Some, however, really shined. Thank you all!

DAVID ARMARIO for his judicious use of Swiss Bold Condensed, his grand vision for Gothic 821 and his perseverance through that little root canal problem. TOM BROWN, too. BRODIE KEAST and MARC AUERBACH for sponsoring our custom-painted Mac contest. JON ZILBER for his wit, but even more for his friendship. ADAM GRILL for the (many) laughs. THOM HOGAN for helping to navigate through Connectix. KATE PAISLEY, MARY DEVINCENZI and ANGIE RODRIGUEZ for being so darned reliable. JIM SHATZ-AKIN and his cheery self for checking in now and then. BOB FILICE for handling those niggling details so well, and on-time, too. SWEETTONE for the wacky e-mails and the tulips. RICHARD FORD for spitting out ideas like a machine gun. MIKE CONNOR for his early support, enthusiasm and the crabcakes. JB for being there—and not. CHRIS ANDERSON for being brave enough to do this magazine and for encouraging us to have fun. Everyone on the MACADDICT TEAM for working night and day and then some—and still loving it.

WIN One of 5 Custom-Painted POWER MACS! It's easy!



Simply send us your best entry in one of these 5 CATEGORIES:

1. **BEST DESKTOP DESIGN** Wacky, elegant, efficient, silly or downright rude.
2. **BEST WEB PAGE** Create a masterpiece on your Mac.
3. **BEST SYSTEM SOUND** Build a better beep or startup sound.
4. **BEST QUICKTIME MOVIE** So you think you're the Quentin Tarantino of QuickTime? Prove it.
5. **BEST GRAPHIC** The only time you'll be rewarded for the gratuitous use of pixels.

Top prize in each category is a Power Macintosh 5400/120, custom-painted by Apple Computer.

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- A bay for a TV tuner module so you can watch TV on your Mac

*Not the actual Macs—Artist's conception only.

JUDGING:

All entries will be judged by the MacAddict team. No, we don't have an elaborate point system. The coolest entry wins. It's that simple.

DEADLINE:

All entries must be postmarked by September 1, 1996 to be eligible.

NOTIFICATION:

Winners will be notified in mid-September.

Winning entries will be showcased in the December issue of MacAddict, on The Disc and The Web Site.

You must fill out and send in the following form with each entry. No photocopies accepted.

NAME:

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   d) QUICKTIME MOVIE Please submit entries on disk, Syquest cartridge, CD-ROM or Zip cartridge.
   e) GRAPHIC Please submit entries on disk, Syquest cartridge, CD-ROM, Zip cartridge or color printout.
7. **DEADLINE** All entries must be postmarked by September 1, 1996.
8. **MAILING ADDRESS** Send entries to: Win A Mac Contest, MacAddict, 150 North Hill Drive, Brisbane, CA 94005
9. **INQUIRIES** Please address all inquiries to the address above or to contest@macaddict.com.

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letters

Attention MacAddicts: our editors are standing by to take your letters.

This Month:

It's our first issue—we didn't have many letters from which to choose. So we grabbed anything we had lying around, motley selection that it was. We know you can do better. Write to us at: MacAddict, 150 North Hill Drive, Brisbane, CA 94005, ATTN: Mac Dudes or send e-mail to letters@macaddict.com.

Talk back to us and talk to each other on our Web site.

Join The Club

My Power Mac 7500 can render a 10MB Raydream Designer image in under four hours. A 1000MHz Pentium would take all night. —Tom Barta

I'm not the most computer-literate person on the planet. I got a 4 on my Fortran midterm in college. As in 4 out of 100. The Mac was made for me. —Jeff Lyons

Back in 1990, my wife and I started a Japanese language translation company. I had plenty of experience on the PC, but had never checked out a Mac. A Japanese colleague of mine told me, "If you're going to get into Japanese graphics and DTP seriously, then you should think about buying a Mac." That was six years and 10 Macs ago. We now have seven Macs (three are Power Macs) and not a single PC. It's not that I hate PCs or anything, but hey, we've got work to do.—Bob Reeo

I love my Mac for its simplicity. It's a lot easier to create .GOB and .WAD files on the Mac than on a PC. —Larry Johnson

And to anyone who laughs at the Mac: "Piss off, you're an idiot". ;) —Darren Burgos

Go Ahead, Beg

I want features, features, features: Xpress versus PageMaker, tips and techniques, Web publishing and games. We're MacAddicts because this stuff is fun. I hope your magazine is equally fun. Best of luck guys! —Kirby Ferguson

I'd like to see MacAddict thrive by living up to its name: become the magazine for Mac enthusiasts, not just Mac users. People get addicted to their Macs because it can be a very enjoyable, very hip machine to have. Throw away the pragmatic and embrace the hip! —Marton Carungay, Warrior-Priest of the Macintosh Way

EEEK!

I found your Web site today and hit about a dozen links. Nice work. But when I looked at your subscription offer, I was startled by your price. "Eeek," I said. "No way, man," and hit the Back button. Good luck otherwise. —Dennis Fagan

Remember Dennis, you get what you pay for. Every issue of MacAddict, includes a CD-ROM that's crammed with great shareware, demos, games, system software, tutorials and trial software.

Yes, Mom

On behalf of Moms everywhere, I'd just like to say that I sincerely hope that I never see one of those "It's so easy, your Mom could use it" statements in MacAddict. Thanks for listening. —Joyce England (the editor-in-chief's Mom), *Hopewell, VA*

Dig Deep

Apple gets a lot of fan letters, but few are this generous.

Dear Dr. Gilbert Amelio:

It is impossible to overstate the positive effect our Power Mac 8500 has had on my family's life and businesses. So it was with real concern that we read about Apple's quarterly loss of $700 million. While considering your difficult circumstances, we hit upon an idea.

We appreciate the near-religious fervor of your supporters. According to a recent ad, this group numbers 56 million. Since this group has a vested interest in Apple's success, we believe they would be eager to act in support of your goals. Thus, we propose that all Mac owners and users send a check for $12.50 per person to Apple with the stipulation that the cash be used only to offset the $700 million loss.

Please have an Apple representative contact us so that we may map out a plan. In the meantime, we are forwarding a check to you for $37.50, representing our three users. —Gregory A. Roach and family, *West Shokan, NY*

Apple, alas, returned the Roach family's check.

Recently Sighted

Macs in the woods.

A few times a year, the Portland Mac Users Group hosts MacCamp. Mac devotees pack up their Macs and their gadgets, head off to Silver Falls State Park, set up a network and spend the weekend learning, playing and programming. Got a Mac sighting? Send it to us!

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the disc

Welcome to the first in our series of super-phat, jam-packed, really rocking CDs!

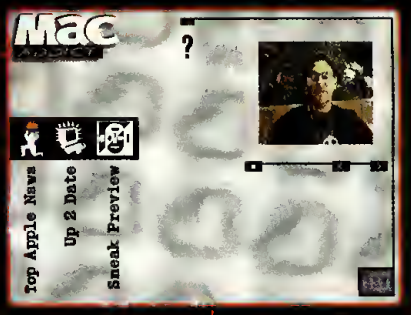
The Disc that you'll find in MacAddict each and every month is packed with shareware, demos, tutorials and plenty of amusing surprises for you to discover. Don't be afraid to click everywhere—you won't break the CD-ROM and you'll find a lot of extra goodies. However, it can take a few milli-seconds—sometimes even seconds—to load your selection. Your Mac needs to access files stored on the CD and that takes more time than if it were reading those files from your hard drive. Read on to find out more about this month's highlights and how to use The Disc.

DEMOS

Move the cursor over the hands to open them. When you see something of interest, click on it to catch a demo. Click on the CD-ROM in the center for even more great demos.

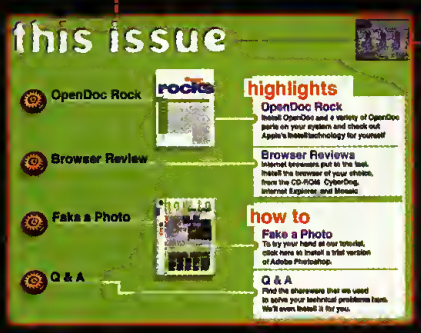
LIVE WIRE

We've set up a special area on our Web site that is accessible only from The Disc. You'll get news, software updates and more.



HELP ME!

Option-click on any help button to go to The Disc index.



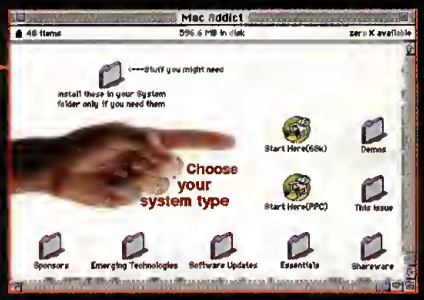
THIS ISSUE

Here's where you'll find software, demos and tutorials related to articles in the magazine. When you see The Disc icon in the magazine, you'll know it's pointing here.

RESOURCES

In here you'll find tons of helpful software. Open a folder and you'll get a list of files. Click on one and you'll see its description. You can then install the file or return to the list.

Getting Started



1. When you first pop in The Disc, you'll see this window.
2. If you are running System 7.5.3, you don't need anything in the "Stuff you might need" folder to run The Disc. If you aren't running System 7.5.3, then you may need some of the files in this folder.
3. If you have an older 680x0-based Mac, click on "Start Here (68K)". If you have a newer PowerPC-based Mac click "Start Here (PPC)".
4. If you don't have enough System memory to launch The Disc you can still access and install all of the included software and demos. Just go to the desktop, open the folders and browse through them.
5. Clicking on the big hand won't cause anything to open, but you can move pieces of the hand around, in essence creating your own jigsaw puzzle. Just close the window and the hand returns to normal.

Requirements

1. To access all of The Disc's features, you'll need 12MB of real RAM if you're running System 7.1 or earlier; 16MB of real RAM if you're running System 7.5 or later.
2. If you don't have enough RAM, you can still access all of the software, demos and tutorials on The Disc from the main folder.
3. You need a 13" monitor that has a resolution of 640 x 480 and 256 colors.

Highlights

On top of the 150-plus shareware files, 20 demos and various other goodies we've packed onto The Disc, we've also included a fistful of System software including OpenDoc, Cyberdog and System 7.5 Update 2.0.

System 7.5 Update 2.0

This latest version of System software (also called System 7.5.3) would take hours to download from the Web. The System includes everything from the previous versions of System 7.5 as well as newer versions of several pieces of Apple software. The version of Open Transport included in this update actually works (you'll have fewer communications problems as a result) and it's speedy. The update also fixes some Type 11 crashes and speeds file copies and application launch times. Translucent dragging adds a voyeuristic quality to working on your Power Mac. You must read and agree to the Apple Software License before installing the software; and you must have an earlier version of System 7.5 in order to install Update 2.0. Finally, note that Update 2.0 will only work with U.S. versions of System 7.5.

Our Disc Sponsors

To find immediate information from our sponsors, go the Index (Option-click on any help screen). Or you can wait until you see a message from them in the lower-right hand corner of the main screen. Clicking on the message causes a TV screen to slide down from the top of the page, showcasing more information.

America Online

800-827-6364
http://www.aol.com/

America Online offers access to the world of online news and information, interactive magazines, finance, entertainment, e-mail, free software, shopping end more. With a point end a click, you can explore the World Wide Web and the vast resourcea of the Internet. Sign on from the demo and receive 15 free houra.

Wing Commander IV: The Price of Freedom

Origin Systems
800-245-4525
http://www.ea.com/origin.html

Fighting for survival is a hard habit to break... and some hard-bitten warriors simply don't know how to embrace peace. Now that the bloody battle between the Kilrathi and Terrens has concluded, the Confederation doesn't have to look very far for its next enemy. Civil wars and unrest heve broken out on the home front. Colonel Blair is recalled to help the Terran government stamp out the growing fires.
It won't be easy. Signs of decay are becoming impossible to ignore. The Confederation is splintering under the new preseures. You must determine how to save it... or if it should be saved at all. Sometimes its far from simple to line your sights on the enemy.

MacPlay

800-4MACPLAY
http://www.macplay.com

Alone In The Dark™: The Trilogy
Inspired by the works of horror writer H.P. Lovecraft, Alone In The Dark has won over nine ewards in the multimedia arena. For the first time ever, Alone In The Dark 1, 2 and the never-before-released Alone In The Dark 3 are all together for Macintosh. "Supernatural Private Eye" Edward Carnby must face off against a host of zombies, pirates and cowboys among other vile, evil-minded creatures. A movie-like approech mixed with fluid animetion, tense atmosphere, bizarre camera angles and spine-tingling horror has made this series en eward-winning favorite.

MacPlay Catalog
Check out MacPlay's latest and greatest titles. There's something for everyone: Action, Adventure, Simulation, Clasaics, Musical Adventures and Kida. There are also some great deals. Check the cetalog for deteils.

Marathon 2 : Durandal

Bungie Software
800-295-0060
http://www.bungie.com

Fresh from your triumph on the starship Marathon, you are seized by the rogue computer Durandal to do his bidding in a distant part of the galaxy. Within the ruins of an ancient civilization, you must seek the remnants of a lost clan and uncover their long-buried secrets. Battle ancient and terrible opponents, with sophisticated weapons and devious strategies, all the while struggling to escape the alien nightmare...

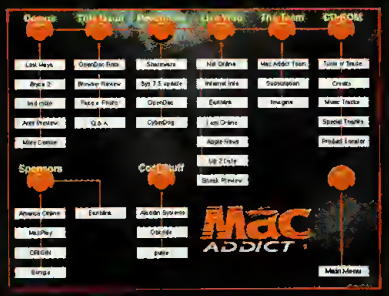
Earthlink TotalAccess

800-395-8425
http://www.earthlink.net

TotalAccess is EarthLink's complete software and Internet connection peckage. It includes Netscape Navigator, an award-winning Internet access softwere, end everything needed to register for complete Internat access in less than five minutes. After the $25 sel-up fee, unlimited access is provided for $19.95 per month. 'Round-the-clock tech aupport is provided via an 800 number.

Things You Need To Know

1. Option-click on any thumbnail of the main screen and you'll see this index for the whole CD-ROM.
2. When the cursor turns into a lower case "i" there's something to click on.
3. If you get a "-108 error" message when attempting to run a demo, you don't have enough RAM installed. Go to the Desktop and access the demo from there.



Win!Win!Win!

This snazzy Epson PhotoPC digital camera.

MacAddict pushes the envelope of three publishing media: print, **CDROM**, and the Web. We're telling you about the contest in print, but you'll have to use both the **CDROM** and the Web site to win. First, you'll need to find a secret hotspot on the main screen of The Disc. Click around; the upper right hand corner might be a good place to explore. When you find the hidden spot on the **CDROM**, you'll see this screen.

You enter a secret code here. Hmm, looks like a telephone keypad... After you enter the code on the **CDROM** (hint), you play a game against your Mac. When you win (it's really easy), your Mac coughs up another code to enter on the MacAddict Web site. Enter the drawing to win an Epson PhotoPC by filling out the form on the Web site.

Hidden Junk!

A CD for Mac enthusiasts would not be complete without a few Easter eggs. Because The Disc is so chock-full of goodies, however, we decided to tell you about at least a few of the hidden tricks.

1. Hold down the rewind button when viewing a QuickTime video (the QuickTime videos that have rewind buttons, that is) and the person starts talking backward.
2. Find out more about the music by holding down the Option key while clicking the bright blue selector lights on the main screen.
3. Find out more than you want to know about our sick and twisted disc producer, Tom Hale. Snoop through his PowerTalk mail on the Resources page.
4. Don't forget to dig through the Trash on the Resources page.
5. Click on the names when you get to the telephone keypad. You'll be surprised at what you hear.
6. Whatever you do, don't click on the MacAddict logo. We are not responsible for the consequences.

Demos

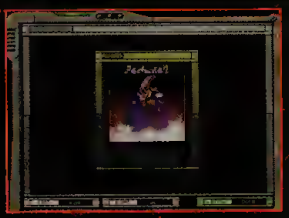
Demos give you a taste of the products you've read about. Run them from either The Disc's front end or from the Finder directly. Some demos are self-running videos while others allow you to actually use the product. Those that let you use the product are generally "crippled" in some way. For example, you won't be able to access all of the program's functions or they will expire after a certain amount of time (usually about a month).

1. Bryce 2

The original Bryce was one of those programs that made us really glad we had Macs. MetaTools Bryce 2 is no exception—see our review on page 56. However, the user interface—like all of Kai Krause's creations—breaks every Macintosh interface convention and then some. When you get confused—and we guarantee that you will—run your mouse over a control and look at the bottom left corner for an explanation. You can also find more help on how the interface works on MetaTools Web site at http://www.metatools.com/bryce20/interface.html. This demo version of Bryce 2 adds a MetaTools watermark to rendered scenes.

2. Ares

MacAddict's exclusive tour of this arcade-style shoot 'em up game from Changeling shows you a few of the many missions you'll need to complete.



3. Bad Mojo

This creepy, crawly preview of Bad Mojo from Pulse Entertainment will whet your appetite for more. The game doesn't disappoint either (see page 55 for a review).

4. Exploring the Lost Maya

This interactive demo from Sumeria (see the review on page 70) lets you explore the ancient ruins, learn more about the rich history of the Mayans and check out Pre-Columbian art.

SmartSketch

SmartSketch, from FutureWave, is a hybrid paint-and-draw program that can do things even Adobe Illustrator can't. The demo includes a tutorial that shows you how to use each of the tools. Here we'll change this fox's skirt into shorts.

1. Use the Eraser tool to delete the front panel of the skirt.

2. Zoom in using the Magnifying Glass. Choose the Arrow tool, then drag the edges of the line so they meet the shirt.

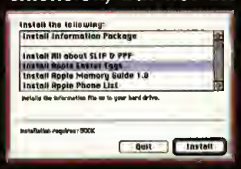
3. Use the Paintbrush tool to make the shorts a different color.

More Demos

- Alone in the Dark 3
- Diamonds 3D
- Gone Fishin'
- Marathon 2
- Overture
- PegLeg
- SmartSketch
- Troubled Souls
- Wing Commander IV
- X-Wing

Resources

We've created installers for all of the programs in the Resources area. If you decide you don't want something you've installed, run an uninstaller to get rid of it. One caveat—we can only track the things we put in your System Folder. So for system utilities like Aaron, we can delete the extension, but not the items that exist outside the System Folder. That said, to run the deinstaller, open an installer from the front end or from the Finder and hold down the Option key—you'll see the uninstall options.



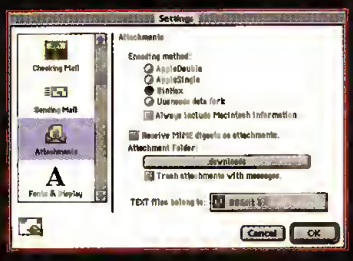
System Utilities

Aaron

Aaron is a system extension that mimics the default appearance of Mac OS 8. In addition to the funky 3D folders, grow box thumb and thicker window borders that are part of the extension's functionality, the package includes a system replacement font and a 3D icon to paste on your hard drive. You'll be amazed at how a makeover can change the feel of working on your Mac!

Greg's Buttons

Greg's Buttons is another utility that changes the appearance of your Mac. Written by the developer of Aaron, the control panel adds a third dimension to radio buttons, check boxes and push buttons. You can also replace your system font and add color to the menubar and finder windows.

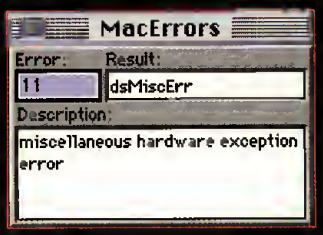


Yank

Long ago, in a galaxy far, far away, the System Folder was easy to manage. Now there are thousands of items in your System Folder—a challenge even for power users to manage. Enter Yank. Yank cleans up your hard drive by removing preferences for programs that are no longer on your drive, and uninstalls programs by moving all files created by that program to the Trash. May the Force be with you as you challenge the dark armies of System Bloat!

Get Info

MacErrors



Wondering what those cryptic error messages mean? Just type the number into MacErrors, press return and you'll get a description. While you might not know what the jargon means, at least you'll have words to wonder about rather than numbers. And for those into gratuitous technology, MacErrors will speak the error to you if you have PlainTalk installed.

Fun & Games

Hearts

For the serious Hearts player, this demo version is way too easy. But once you register, you get computer players that will stick you with the queen of spades faster than you can blink an eye.

Creative tools

LandSculptor

If Bryce's interface has you bummed because you can't figure out how to edit landscapes, install LandSculptor. This nifty utility creates DXF files that you can import into Bryce or any 3D rendering program. Draw on the left and see the landscape on the right.

The Web Site

As MacAddicts, we can't wait a whole month to blab about all that's new and cool. For your daily dose of Macintosh mayhem come on by http://www.macaddict.com.

Insert CD now...

Like many Web publishers, we find ourselves on the horns of a terrible dilemma. On the one hand, we'd like to showcase the newest multimedia technologies, bringing sounds and animation to our Web site. On the other hand, we don't like waiting for minutes at a time to download flashy QuickTime movies and whatnot any more than you do. Here's our solution...

You'll find a mysterious Multimedia Enhancement option on our home page. Insert The Disc, click on the Multimedia Enhancement option and follow the instructions. Lo and behold, you'll find that our Web site is now enhanced with pointless, distracting, yet oh-so-fun QuickTime animations. Even better, you get all this noisy frivolity without any of the tedium of downloading large files, since all of the files are stored right on the CD-ROM.

You'll need a couple of things to work this multimedia magic, however: Navigator 2.0 or later (or another browser that supports JavaScript and Netscape-style frames), a CD-ROM drive and a QuickTime plug-in (the latest plug-ins will be available from the Web site). As we continue pushing the technological envelope, we'll be working on endless ways to bring more multimedia wackiness, to more people, with even more ease and speed than ever before.

This Issue

A lot of Apple's bright future depends on OpenDoc. Try it for yourself. Install the KickStart parts and Cyberdog to get the complete OpenDoc experience.

OpenDoc Installer

OpenDoc 1.0.4 lets you use OpenDoc editors, parts and stationery. Installing OpenDoc will add OpenDoc system software to your Extensions folder, the Editors folder to your System Folder and the Stationery folder to the root level of your hard drive. See OpenDoc Rocks on page 36 to find out why you should—or shouldn't—install this software.

KickStart Parts

Find the KickStart parts in the OpenDoc folder. KickStart is a collection of OpenDoc parts that Apple will release this summer to get OpenDoc moving. KickStart includes KickStart Draw (a drawing part), OpenDoc viewers for QuickTime and QuickDraw 3D files, an image viewer that can handle PICT, GIF, JPEG and TIFF files, and a drag-and-drop button that can contain AppleScripts, text-to-speech, Cyber-Items and sounds. Note: these are pre-release PowerPC-only OpenDoc parts. The complete KickStart package will be released in August.

Brave New Browsers

If you're like 84 percent of the Net-surfing public, you're using Navigator. If you want to try a different browser (see Brave New Browsers on page 43), we bring you info you need on NCSA Mosaic, Microsoft Internet Explorer or Apple's Cyberdog (you'll have to install OpenDoc first to use Cyberdog). If you want to use Navigator and don't already have it, you can find it in Earthlink's Total Access package.

Let's Pretend! Space is our Playground!

The kids at our local elementary school loved this spiffy space program (see their review on page 75). Let your little ones try it out for themselves. Almost everything in the attic can be clicked on. Some items take you on a short tour of other planets, but the fun parts of the demo are in the attic.

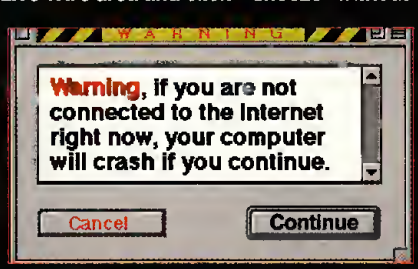
Photoshop

Use the trial version of Adobe Photoshop to do the "How to Fake a Photo" tutorial on page 78. There are also five photos for you to use.

Live Wire

CD-ROMs are great—but we recognize that The Disc will be at least one month old by the time you get it. Given that this is the age of instantaneous information, the CD may seem dated already. Not so! Through the miracles of modern technology, we've found a way to keep the CD fresh. You will need an Internet connection, however.

If you don't have a modem or a direct connection, you're SOL. If you have a modem, but not an ISP account, you can take advantage of a special deal we've set up with Earthlink, a national ISP. Go to the Live Wire area and click on the "No, I'm not connected" button. You'll get an intro to the Internet, contact information for other ISPs and information on Earthlink's special offer.



Once you've set up an Internet account, you'll need to start your Internet connection manually. If you're using MacPPP, open the ConfigPPP control panel and click the "Connect Now" button. Choose the "Yes, I am connected" button. You can then connect to an area on our Web site set up especially for users of The Disc.

You will be warned one last time to make sure your modem is running. We update the Apple news section daily—Gil Amelio won't sneeze without you hearing about it. Our sneak preview gives you a glimpse of next month's issue. And up2date lets you know about new versions of software included on this month's Disc.

To course, we couldn't hear a word they said. So we smiled, nadded, then releosed **ABUSE.** As you **run, jump, and fall** in every direction, [illegible] enemies with **Napalm Bombs, Lightning Prods, Grenades,** and the **Death Sabre. ABUSE** is 360° of side-scrolling action through [illegible] **corridors, caverns,** and **picturesque sewers.** And **8-person ABUSE network play** will be a big hit at the next **P.T.A. meeting.**
ABUSE
BEFORE RELEASING OUR LATEST GAME, WE LISTENED TO PARENTS AND TEACHERS WHO EXPRESSED THEIR CONCERNS ABOUT COMPUTER GAME VIOLENCE.
To get your ABUSE, call 1-800-[illegible], or visit www.bungie.com. ©1996, Crack dot Com. Abuse and Crack dot Com are trademarks of Crack dot Com. Bungie is a trademark of [illegible] Products Corporation. All rights reserved.
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BUNGIE

get info

News, trends and other very valuable information that you will want to know

Pippin: Teacher's Pet or Bad Apple?

The sleek, black @World is made to match your VCR.

Pop in a CD and the software automatically loads.

"For the first time ever, you can access the World Wide Web and enjoy high-quality CD-ROMs and e-mail access—all without a computer!" So states the crisp marketing brochure for Bandai Digital Entertainment's $599 Pippin @World. Based upon Apple's Pippin technology, the @World, which ships in September, supposedly fills the world's craving for a sub-$1,000 machine that's easier to use than any Mac. The sleek black box easily fits into your home entertainment center; like a VCR it uses your TV set as a display.

The idea of the @World is elegant and easy. Pop a Macintosh CD-ROM into it and the software auto loads—you never have to deal with the Mac OS that is contained in ROM. You control the software using a keyboard or an infra-red controller. That's all there is to it.

These days, no good product intro is complete without an Internet hook.

A dream come true? Sigh, we think not. Oh sure, it's a great idea. But, like the first Newton, the product has enough flaws that it's at risk of becoming the next butt of some cartoonist's joke.

The @World is based on a 66MHz PowerPC 603 processor and includes 6MB of RAM, which can be expanded to 14MB. What's wrong with that? Today's best games require PowerPC 604 processors and 16MB of RAM. Granted, the @World's System software requires less memory than System 7.5.3 because the @World doesn't need such items as SCSI Manager (it doesn't have a SCSI port). Even so, 13MB is barely enough to play most games. If the @World is going into living rooms across America, it had dam well better support Joe Jr.'s favorite pastime.

Also, developers must tweak their programs in order for them to display properly on TV sets—something they seem reluctant to do for an as-yet unproven platform. This lack of support from developers was evident during the introduction of the @World in Los Angeles in May. Although the @World had been shipping in Japan for six months and although Apple had hosted developer kitchens in the U.S. to rouse enthusiasm for the product, the software showing was skimpy. There was software that showed you how to make sushi, a Japanese comic book on a CD and a program to create movies from a teensy selection of clips. And these were the most interesting.

Oh, but wait. These days, no good product introduction is complete without an Internet hook. The @World lets you surf the Net via PSINet. But the Web, with its graphics, animations, QuickTime movies and large pages, looks terrible when it is displayed on a TV screen. Not just bad, terrible. Text is barely legible and because viewing space is limited, you have to scroll more than usual.

We're only hard on the @World because we think the idea behind it is worthwhile. We'd like to see a less-expensive version that includes a Digital Video Disc player and has more powerful hardware. Most of all, we want to see software that compels us to use this sleek box. But for now, our BS detector is beeping. —*CE*

The @World uses Apple's Pippin technology.

Tape is Dead

A new storage media, Digital Video Disc (DVD) will, over time, replace CD-ROMs, audio CDs and VCR tapes. The discs are the same physical size as a CD, but they can hold five times as much data (4.7GB). Games that currently come on multiple CDs can be packaged on one DVD and audio CDs will be able to hold more tracks or even video. Movies can be stored on one disc and will provide much higher quality than tape does. Consumer players should ship this fall; players for the Mac won't ship until early 1997. (Players will be able to read current CDs.) Eventually, DVDs will be able to store data on both sides of the disc, thus increasing capacity, and they will be erasable, just like videotape is today. —*CE*

The Specs

DISC DIAMETER: 120 mm (5 inches)
CAPACITY: 4.7GB
DATA TRANSFER RATE: 4.69 Mbit/second
RUNNING TIME: 133 minutes of video per side.

The Cost of Memory

Unraveling the mystery of RAM prices

For years, RAM has been notoriously expensive. Then, early this year RAM prices dropped. Why does a 4MB SIMM now cost $55, when a year ago it was $125? The price of RAM is firmly rooted in the basic laws of supply and demand.

A few years ago the price of RAM went up and stayed up while the price of other essentials, such as hard drives, dropped dramatically. Typically, as computer components become faster, larger or more feature-rich, they also become cheaper per unit. Remember when an 80MB hard drive cost $350? Now you can get a 1GB drive for about $200. But RAM prices took a different course.

In 1989, RAM prices dropped to what was then their lowest price levels ever due to oversupply. Too much RAM was being produced and not enough new computers were being sold. In the following years manufacturers were reluctant to invest in new factories, (called "fabs"), in fear of prices dropping even lower. The smallest fab can cost over a billion dollars to build: a major investment.

The predictions were wrong. Computer sales during the 1995 holidays lagged.

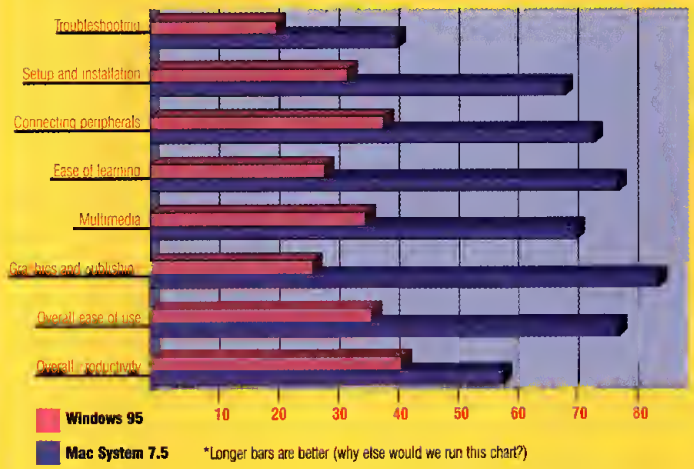
In time, new Mac and PC sales climbed steadily, as did the demand for RAM. Few new fabs were built between 1989 and 1994, and the RAM supply grew tighter. By late 1994, new computer sales were reaching all-time highs and so was the price of RAM. "We were basically selling everything we could for the price we were charging," says Kevin Kilbuck, memory engineering manager for Toshiba, a major RAM manufacturer. It wasn't until 1994 that RAM manufacturers began announcing plans to build new fabs. But new fabs can take over a year to bring online. "By the time they started spending the money (on new fabs), the price of RAM was at an all-time high," says Ty Lane, senior buyer for Newer Technologies.

The prediction that millions of PC owners would upgrade to a RAM-hungry Windows 95 and that millions of new personal computers would be sold during the 1995 holiday season increased the demand for RAM even more. Computer makers bought all of the RAM they could to meet the expected demand. The price stayed high.

The predictions were wrong. Personal computer sales during the 1995 holiday season didn't meet expectations, nor did the demand for Windows 95. At the start of this year (some experts say earlier) computer makers watched the value of their RAM inventories depreciate before their eyes. Intel wrote off $100 million worth of RAM alone. At the same time, new fabs announced just the year before began production. The market swelled with excess RAM; prices took a nose dive.

Be assured, the price of RAM will inevitably rise. As 16MB becomes standard on new machines and as applications and the MacOS require more and more RAM, market demand will, again, catch up with supply. However, predicting the cost of RAM is a mystery even to the experts. "Every time I think it's stabilized (the price) either goes through the floor or though the roof," says Lane. *—JK*

We've known it all along



The Mac is a better machine. Don't believe us? Think we're biased? Then check out these survey results from Evans Research. In a recent survey on computer use, Evans Research polled people who work on both Macs and Windows 95-based computers. In most cases, the Mac was the favorite. In one area—the ease of connecting peripherals—the Mac was rated twice as highly as Windows 95. So much for plug-and-play in Windows.

So take heart, fellow MacAddicts. When your Windows 95-using friends start to give you grief, just pull out this handy chart and say "I've got proof, pal." *—DR*

Deciphering Version Numbers

System 7, Version 3.0, update 5.3.x: How do developers come up with version numbers? There are guidelines, but the jury is still out on when a minor upgrade becomes a major new release.

Generally, major releases start with a whole number, such as 1.0. From there, versions with added features are assigned a second number, making the version 1.1. Minor revisions, typically bug fixes, get a third number, bringing the version to 1.1.1. With an operating system, however, even the smallest number change is a major event. System 7.5.3, an update of System 7.5.2, fixed over 1,000 bugs. Extremely minor bug fixes may get no number at all. This trick, called "slipstreaming," is a way of fixing a tiny problem without admitting guilt.

Why are version numbers greater than 8 or 9 rare? First, the software industry hasn't been around long enough. Second, company mergers and product buyouts can effect numbering. FileMaker Pro, for example, has been around for years but is only at version 3.0. Originally, FileMaker was called Nutshell. But in 1987, Nashoba Systems bought the product and renamed it FileMaker. Versions went up to 4.0, but when Claris acquired FileMaker in 1990 it changed its name to FileMaker II and set the version number back to 1.0.

Naming schemes for pre-release versions of software is also complex. Products start as pre-alpha then move to alpha, beta, beta with a release number and finally golden master, where the features and interface are frozen. In the past, beta software hasn't been accessible to the public, but the Internet is changing all that. Netscape always has a new beta of Navigator on its Web site and other companies are following suit. *—JK*

AOL Member Profile

SCREEN NAME: Gil Amelio
MEMBER NAME: Gilbert Amelio
LOCATION: 1 Infinity Loop, Cupertino, California
BIRTHDATE: 3-16-40
MARITAL STATUS: Married
COMPUTERS: Macintosh
OCCUPATION: President, CEO, Chairman of Apple Computer Inc.
QUOTE: "I love Apple"

get info

Changing The World
One Person At A Time

Even though Steve Jobs, the visionary behind the Mac, made the phrase "Changing the World, One Person at a Time" popular, very few people have taken him seriously—until now. We at MacAddict are putting a Mac (actually a Power Computing PowerWave 604/150) into the hands of James Fallows, the Washington Editor of The Atlantic Monthly and a commentator for National Public Radio's "Morning Edition." Our goal? To wean him off OS/2 and get him hooked on a Mac. Check next month's issue for the results and The Web Site for updates.

Will James Fallows make the switch from OS/2 to the Mac?

WATCH THE WEB site for regular updates from James.

CURRENT SYSTEM: Pentium-based PC running OS/2.
CURRENT SOFTWARE: DeScribe, Corel WordPerfect, Microsoft Word, Lotus Agenda, askSam, InfoSnatch, Symantec GrandView and Internet access.
PC USES: Communicating via e-mail and the Internet. Collecting information and organizing it in different ways.
WHY HE'S INTERESTED IN THE MAC: "I intrinsically resent the tyranny of Windows. It's a tyranny of mediocrity. The Mac is a statement against that."
WHAT HE EXPECTS TO FIND: "I'm hoping that the Mac will offer me a different way to organize and look at information."
HIS DARKEST FEAR: "That the two worlds [Windows and Mac] have converged enough that they're not very different."
PAST QUOTE: "Sorry: once again you'll get no Macintosh references from me. If I had had perfect foresight, I would have started down the Mac road a dozen years ago, because Macintosh systems, while more expensive, are much less harassing to use." (The Atlantic Monthly, March 1996, page 115). —*CE*

Mac Products Provided

Adobe Photoshop • Adobe fonts • Aladdin StuffIt 4.0 • Attain In Control • Berkeley Systems AfterDark • CE Software WebArranger • Chena InfoDepot • Claris FileMaker Pro • Claris Em@iler • Claris Organizer • Connectix RamDoubler and SpeedDoubler • DataViz MacLink Plus • GDT adapter for LaserJet II • Global Village TelePort Platinum modem • Iomega Zip drive • Microsoft Office • PF. Magic Dogz • Power Computing PowerWave 604/150 • Prairie Group InTouch • Visioneer PaperPort Vx.

NEW FOR THE MAC

ADOBE TYPE MANAGER DELUXE 4.0
(Adobe; 800-521-1976; $49.95 for the first 90 days it ships; $99.95 thereafter; ships August)
ATM Deluxe now lets you group fonts in custom sets, print sample font pages and turn fonts on and off on-the-fly. It can search for fonts on a hard disk or over a network and activate those you pick instantly. Support for TrueType and anti-aliasing of screen fonts are also new.

ADOBE ACROBAT 3.0
(Adobe; 800-521-1976; $295; ships August)
Acrobat's new features make it even more handy for use on the Web. Highlights include: a plug-in that lets you view Acrobat files in a Web browser, faster downloading of Acrobat files over the Internet, the ability to create interactive forms and support for Kanji fonts.

CLARIS HOME PAGE
(Claris; 800-3-CLARIS; ships late summer)
This cross-platform Web authoring program can either hide HTML or show it all. It supports tables, embedded Java and Javascript applets and frames.

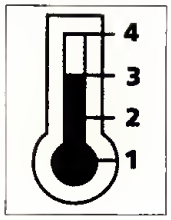
ACTIVE ART
(Plastic Thought; 800-635-5715; $79.95; ships fall)
Clip art fans will think they've died and gone to heaven. Not just plain, static, boring flat clip art, these are 3D images in QuickDraw 3D's DMF format. You can rotate images in 3D space and position them however you like.

Rating Game

G, PG, R, NC-17, and X. Sound familiar? Parental concern about violent and sexual content in software has prompted national retailers such as Toys R Us, WalMart, Target and Sears to sell only entertainment titles that include a rating. To meet retailers' concerns about media content and to avoid government regulation, the software industry is embracing two ratings systems: The Entertainment Software Rating Board (ESRB) and the Recreational Software Advisory Council (RSAC).

The ESRB rates products using five age-based categories. In addition to a rating, the ESRB provides brief descriptions of any potentially offensive content. RSAC's rating system is similar, using four categories divided by content, rather than by age, and providing more detail on the intensity of the content.

To earn a rating from the ESRB, a publisher must submit their title and pay a fee, which ranges from $100 to $500 per title. The ESRB sends the software out to three reviewers who grade the content. Reviewers range in age from 20 to over 60 and are not always entertainment or software experts. Call ESRB at 800-771-3772 to get title ratings.



The RSAC system requires that developers complete a questionnaire, providing details about foul language and sexual and violent content in titles. Answers are fed into a computer program which spits out a rating; human reviewers evaluate a title only when a publisher has a query about the questionaire. RSAC's rating system costs publishers from $50 to $400 per title. You can reach RSAC at 617-864-5612.

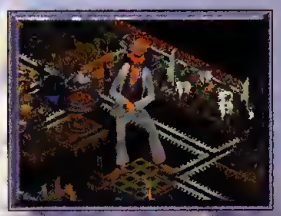
Which system is better? It all depends on the needs of the retailer. But in the end, both systems provide the consumer with valuable information—and without government intervention.
—*Angela LoSasso*

AND ON THE 8TH DAY, HE SPLIT TO MAUI, AND LEFT YOU IN CHARGE.

Don't forget to feed the fish.

BUILD AND MANAGE TWO PLANES, HEAVEN AND HELL, SIMULTANEOUSLY.

KEEP SOULS HAPPY BY PROVIDING THEM WITH THE REWARDS AND PUNISHMENTS THEY EXPECT, LIKE DREAMADISE.



DISASTERS INCLUDE DISCO INFERNO (PICTURED), HELL IN A HANDBASKET AND HEAVEN NOSE.

INTRODUCING Afterlife™ THE LAST WORD IN SIMS.

Afterlife. The first world-bu[illegible] simulation that lets you ma[illegible] two planes of "unreal est[illegible] heaven and hell – simultan[illegible] Start with the Gates of H[illegible] and Hell, zone in blocks of Sins or Virtues and build roads. Soon, the dearly departed arrive in droves. Keep them happy and you flourish. Lose focus[illegible] and it's a visit from the Four Surfers of the Apocalypso. Add a half-dozen disasters, money problems, lost souls, headaches on the planet below, and things get complicated quick. With over 200 artistically rendered rewards, nearly 300 detailed tiles and buildings, and more maps, graphs and charts than you can shake a pitchfork at, you're in for infinite hours of game-play.

WINDOWS 95, DOS & MACINTOSH CD-ROM

http://www.lucasarts.com

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QuickTime Shifts Toward the Internet

QuickTime, the video format that's invaluable to both Mac and Windows users, is shifting its not-inconsiderable digital influence to the Internet in a few different ways: the QuickTime Netscape plug-in is its most obvious. This plug-in, the first third-party plug-in to be bundled with Netscape, will allow movies to start playing almost immediately—you won't have to download the movie and then open a helper app in order to see it.

How does it work? When you click on a QuickTime file, the plug-in goes to work. If the file hasn't been flattened (had both resource and data forks compressed into one fork), Netscape will open a new window to play the video; if the site's Webmaster has flattened the file, then it will play in place. With the Fast Start feature, files will play as they download, starting as soon as the plug-in has enough of the file to play it through without stopping to wait for more. This isn't streaming, but it has the same feel.

Although the QuickTime plug-in uses the Fast Start feature, it doesn't help much when file sizes get large. With a 2MB movie downloaded over a 28,800bps connection, it can be ten minutes or more before the movie plays—not exactly a fast start. Music, though, is a different story. Because QuickTime uses MIDI to handle music, the file size is small, sometimes as small as 5K (Dvorak's New World Symphony, No.9 is a mere 114K). These files download quickly, and music can be heard almost instantly.

Drag and drop sounds to make custom synthesizer voices.

The summer release of QuickTime 2.5 beefs up its ability to handle MIDI files, making these online compositions more enjoyable. You can drag and drop sounds to create your own synthesizer voices, and developers can include any voice they want in applications. QuickTime 2.5 will also feature a control panel that will allow the MIDI data to be routed to any external MIDI device, which is of special interest to anyone with a home music studio. Hit the Beethoven page, download a MIDI file, route it to your synthesizer setup and be prepared for a great musical experience. QuickTime 2.5 also handles .kar files that have been showing up on the Internet. These files have a text track and a music track which QuickTime puts together to make—you guessed it—karaoke.

Apple is also shipping the QuickTime MPEG Extension, which lets QuickTime handle MPEG (a file format that is somewhat common on the Internet) video files. The MPEG Extension allows reasonable playback quality for MPEG files—about 15 frames per second on low-end Macs. Mac users will be able to use these files like they would any other QuickTime file, including editing the MPEG file with cut, copy and paste. That's quite a change for those who have been playing these files back without the kind of coordination that QuickTime provides. *—DR*

What's In A Name?

The System 8 Update: Renaming Copland

When Apple revealed its System software plans to the press back in late 1994, it referred to upcoming systems by code names taken from famous composers such as Copland and Gershwin. Many people within Apple and outside, however, also referred to Copland (the first release in the series) as "System 8" in spite of Apple's protests that the System's final name had not yet been decided. Now, in a twist of common sense, Apple has officially announced that the next version of the System will be called Mac OS 8—and that it won't ship until mid-1997. *—CE*

Test Yourself

How efficiently do you use your Mac? Are you a wizard of speed and time, or are you lollygagging about, wasting precious minutes of your all-too-short life at your Mac in an effort to get things done? Take our quiz and find out if you're about to burn up in the atmosphere through sheer speed or if you've got one too many drag chutes open.

1. WHEN YOU ARE IN A DIALOG BOX AND YOU WANT TO GO TO THE DESKTOP, YOU:

a. use the pop-up menu above the scrolling window to select the desktop

b. reset your Mac using the power switch and wait for the Finder to come up

c. click the desktop button to the right of the scrolling window

2. IF YOU ACCIDENTALLY LAUNCH THE WRONG APPLICATION, YOU:

a. quickly type Command-period to stop the launch

b. wait for the application to finish launching while screaming "No, no, no!" then type Command-Q

c. try to use that program to do what you wanted to do in the first place (Ever try to play Marathon in Word?)

3. WHEN YOU CAN'T FIND A FILE, YOU:

a. ask your significant other "Honey, where's my file?"

b. type Command-F in the Finder

c. open each folder one at a time until you find your file

4. WHEN YOU'VE HAD ENOUGH OF THE MESS ON YOUR MAC AND WANT TO CLEAN IT UP AND SORT YOUR ICONS, YOU:

a. call a cleaning service

b. sort the files manually then select Clean Up from the Special menu

c. select Clean Up while holding down the Option key to clean up and sort icons in each window

5. WHEN YOU'VE OPENED A WINDOW THAT'S NESTED EIGHT FOLDERS DEEP, CLOSING EACH WINDOW AS YOU OPENED IT AND YOU WANT TO GO BACK FOUR FOLDERS, YOU:

a. press the Command key while clicking on the open window's name to invoke a pop-up menu of all the folders along that path

b. go to the desktop and open folders until you find the one you want

c. decide it's too much work to go back and turn on the television

ANSWERS

1. a-5 points; b-1 point; c-10 points (typing command-D will also work). 2. a-10 points; b-5 points; c-1 point. 3. a-1 point; b-5 points; c-10 points. 4. a-1 point; b-5 points; c-10 points. 5. a-10 points; b-5 points; c-1 point.

SCORING

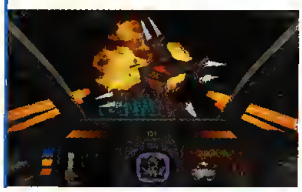
5-15 POINTS: You probably spend most of your time trying to get your Mac to do what you want it to do, and most of your money on new equipment and lawsuits (although you have an impeccable sense of humor). Read the manual when you get some time.

16-40 POINTS: You get some things done with mouse in hand, but there's always room for improvement.

41-50 POINTS: You've been studying Finder shortcuts (or you cheated on the quiz).

IF YOU'VE GOT THE GUTS WE'VE GOT THE GAMES

Descent II™ If you thought Descent™ went to the edge of 360º 3D power-blasting sensory insanity, then prepare yourself. You're about to plunge over the edge and into the abyss.



Virtual Pool™ It has all the angles and all the shots. A game so real we guarantee that it will improve your actual pool game...or your money back!

AND A LOT MORE..

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Packed with actian, shotguns and revenge

An Egyptian mystery starring Malcolm McDawell

3 CD-ROM set featuring Alone in the Dark 3™

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http://www.macplay.com

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Only the top products that we can't wait to get our mitts on.

Pilot PDA

Palm Computing

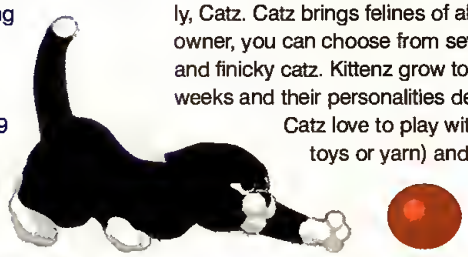
Palm Computing's Pilot PDA is a sort of "Newton-lite" product, but only in size. The hand-held cutie measures in at 4.7" long by 3.2" wide by 0.7" deep and, including batteries, weighs in at 5.7 ounces (that's one-third the Newton's weight). Like the Newton, the Pilot organizes addresses, appointments, to-do lists and notes, but the best thing about the Pilot is the ease with which you can make sure your files are up-to-date. Just drop the Pilot into its desktop cradle, push the HotSync button, and your Pilot and Mac will talk about what to update, even while you're working on something else. The Pilot recognizes handwriting at up to 30 words-per-minute, "assured of 100% accurate text recognition every time," (or so the brochure says), or you can use Pilot's on-screen virtual keyboard. The Pilot also comes with software that lets you to painlessly edit, import and export data (including tab-delimited data) to and from your Mac. It even has a serial port so you can connect it to external devices. The two Pilot models available this summer—the Pilot 1000 and the Pilot 5000—cost $299 and $349 respectively. A neat little fact: the Pilot uses a 68000 microprocessor, same as the original Macintosh. Call 800-881-7256 or visit http://www.usr.com/palm for more information.

SMALL AND SIMPLE, YOUR POCKET LOVES IT.

Catz

PF. Magic

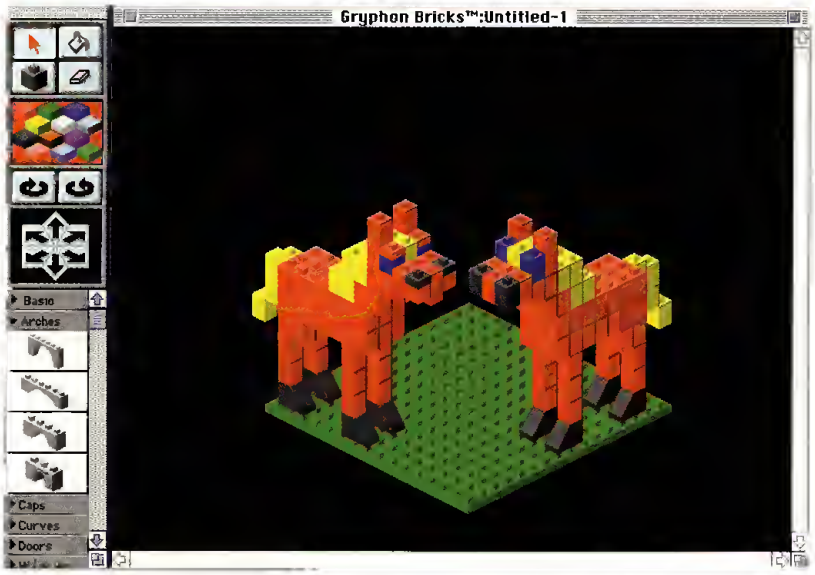
You're not a dog person, but you don't want to deal with litterboxes and shredded upholstery. PF. Magic, makers of virtual pooches, has released a Dogz follow-up for cat people named, surprisingly, Catz. Catz brings felines of all stripes to your Mac. As a Catz owner, you can choose from several breeds: fat catz, alley catz and finicky catz. Kittenz grow to be mature Catz in a couple of weeks and their personalities develop as you play with them. Catz love to play with toys (a Catz dancer, squeaky toys or yarn) and they also have their own kitty indulgence, catznip, which might lead to a catznap. Catz should be awaiting your adoption as you read this, so go to http://www.pfmagic.com/catz to play with several different kittenz or call 800-48-ADOPT to adopt your pet ($19.95 srp).



Touch-The-Music System

Gefen Systems

You've got to be seriously jonesing for home theater equipment and tons of audio CDs to consider buying the Gefen Touch-The-Music system. Get your fix for both with the Touch-The-Music system: it just plain rocks. And it runs only on a Mac. Sorry, Windows users, for once, it's your turn to wait. The Touch-The-Music system is an electronic jukebox that, in combination with a touch-screen monitor, a large-capacity CD changer (or changers—the system can handle up to 1,000 CDs), and Gefen Systems' Touch-The-Music software, lets you choose any song in your CD collection just by touching its cover art on a screen. The Touch-The-Music system organizes your collection by artist, title, playlist or music style, and the system stores and shows the CD jacket art along with liner notes. If you put this on your shopping list and your Mac already has 8MB of RAM, 24-bit color and 80MB of hard drive space, all you need is a Pioneer 100 CD changer, a color touch-screen monitor and the TTM1000 system. The touch-screen monitor is optional; although the system works with keyboard and mouse, a few of the setup menus won't appear without the touch-screen. The TTM1000 system is $1,500. The optional customized 100 CD database (with jacket art scanned in) is another $700. Gefen will also scan in additional titles for a fee of $3 to $10 per CD. To find out more, call Gefen at 800-545-6900, or go to http://www.gefensys.com.



Bricks

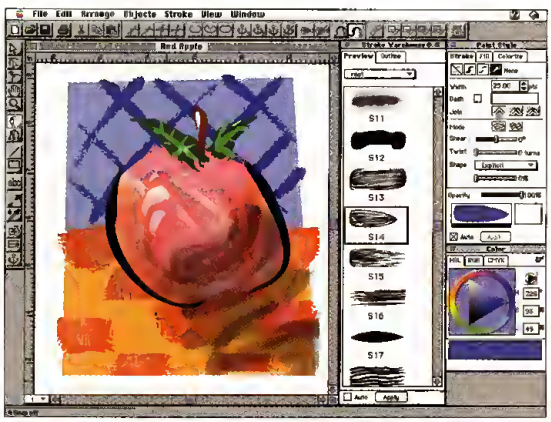
Gryphon Software

As a kid, you never had enough yellow four-post Legos in a set to finish that killer castle. You always had to substitute red, and then it ended up looking dorky and your friends would laugh at you, giving you something to talk to your therapist about years later. Heal that inner child with Gryphon Bricks. Gryphon Bricks is a virtual Legos set: you'll never run out of that special color at a crucial moment. The set comes with more than 200 brick styles in 12 colors, so you have a full palette to draw from when creating. Gryphon Bricks comes on a CD, has a suggested price of $49 and includes two versions: one for kids (ages 5-10) and one for older kids (read: adults). The kids' version includes a "child-friendly" interface, premade models and character pieces. The one for older kids adds the ability to animate masterpieces and print out parts lists and plans for making your creations with real building bricks. For more info call 800-795-0981 or surf to http://www.gryphonsw.com.

Fractal Design Expression

Fractal Design

Now your digital artwork can capture the feel of a van Gogh without the madness or the loss of extraneous body parts. Fractal Design's Expression illustration program uses Skeletal Strokes—a way of combining multiple elements into a single stroke—letting you draw with what look like charcoal, pencil, brush-and-ink or other traditional tools, all in one stroke. The really neat thing is that since these strokes are vector-based, they can be stretched or moved to fit your illustration. Expression comes with a stroke library, and creating your own is as easy as importing a vector-based piece of clip art and defining it as a stroke. Expression supports transparency and pressure-sensitive input devices, and should be released in September (look for it for under $300 on the street). For more information on vector-based drawing, call Fractal Design at 408-688-8800, or go to http://www.fractal.com.



IT'S FUN. IT'S EASY. IT'S YOUR ART.

Force Feedback

Immersion Corporation

As creepy as it sounds, Immersion has created technology that will make joysticks come alive in your hands. I-Force Force Feedback brings that AIM 120 that's slamming into your virtual F/A 18 to life by jerking the joystick; it also delivers the bouncing jolts of driving over a rough road in your favorite racing simulation. To demonstrate just how exciting I-Force is, Immersion showed it off at a gaming trade show in a game similar to Pong, and guess what—it even made that digital dinosaur exciting. Although it's a little eerie at first, you'll soon want I-Force in every game you play. Immersion has licensed I-Force to several developers, and some games, like Descent II and Flying Nightmares II, already support it. Expect to see Mac versions of these joysticks (along with other compatible games) available early next year. Gaming peripherals using I-Force are expected to cost between $100 and $149 when released. For a list of updated software titles that will support I-Force, call 408-467-1900 or point your Web browser to http://www.force-feedback.com.

FEEL THE BUMPS WITH THIS NEW JOYSTICK TECHNOLOGY.

HOW ABOUT A BIG 'MECH WITH AN ORDER TO FRY?

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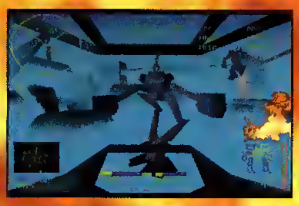
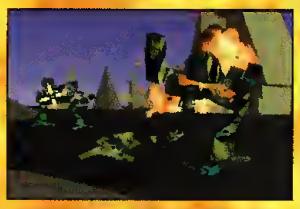
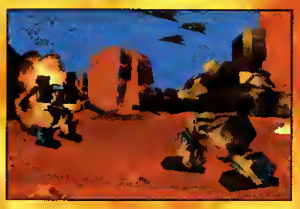
HOT OFF THE GRILL



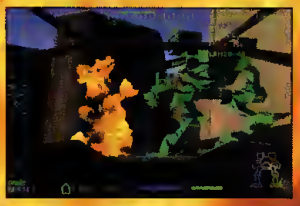
Strap into a 3-D virtual cockpit that quakes with every blast.



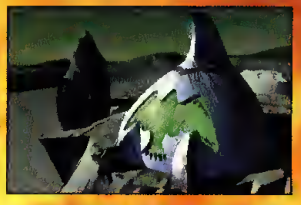
Customize over 15 BattleMechs with 20 unique weapons systems.



Brave ultra-realistic combat over interplanetary landscapes.



Leap into Instant Action or advance through a complete career.



Witness stunning graphics and sound effects in dozens of missions.

Features a video intro, high-res animations and texture-mapped 3-D objects.

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Just what the Doctor Ordered

by Owen W. Linzmayer

At Apple's shareholders' meeting on January 23, 1996, an outraged fund manager stepped up to the microphone and addressed CEO Michael H. Spindler, "I have not heard any self-criticisms. You have mismanaged assets... You have brought a great company to its knees... Mr. Spindler, it's time for you to go!" Apparently Apple's board of directors agreed, and on February 2, it replaced Spindler with board member Gilbert F. Amelio. Three days later, Amelio assumed the role of Chairman and CEO of Apple Computer. He publicly stated that he would work "to build a business as great as our products." Dr. Amelio, as he likes to be called (he has a Ph.D. in physics), has his work cut out for him.

"We have ourselves in a little trouble now," Amelio admitted, but added "the troubles are very fixable. I've been down this road before." Indeed he has. Amelio is credited with turning around National Semiconductor, the world's fourth largest computer chip manufacturer. When he arrived at National Semiconductor in 1991 as chairman, president and CEO, the firm was near bankruptcy, having suffered $320 million in losses over four consecutive years. In 1995, it reported its third straight year of profits, earning a record $264 million on sales of $2.4 billion. Granted, while National Semiconductor hasn't enjoyed the same growth as the overall booming chip market, it has clearly been pulled from the fire.

Can Amelio put the shine back on Apple?

Amelio rescued National Semiconductor by, among several other things, chopping a third of its workforce, closing or selling five of 14 factories and streamlining its product line. It appears he's following much the same course at Apple.

Amelio dislikes being called a "turnaround artist," since he feels that the term conveys the image of an executive who cleans house by slashing budgets and selling off divisions before moving on to the next challenge. He prefers the term "transformation manager," which implies the building of a stable foundation for long-term profitability. Judging from the following list of things he's already accomplished at Apple, Dr. Amelio appears to have the right prescription for getting Apple back on its feet.

Evangelists return.

1 Outlined his strategy within 100 days. When Amelio took over on February 5, Apple desperately needed to articulate its vision, and fast. Amelio stated that he'd have a plan in 100 days. On May 13, after 98 days on the job, Amelio outlined his strategy for getting Apple back on track at the Worldwide Developers Conference (WWDC) in San Jose.

2 Quelled the takeover rumors. Before Amelio took charge on February 5, the national news was rife with speculation that Apple would be taken over by any number of potential suitors, most notably Sun Microsystems. On February 8, Amelio put it very bluntly, "We have no [merger] talks going on; we don't intend to have any; and I don't see it in the foreseeable future."

3 Focused on bringing Apple back to profitability. Amelio has repeatedly said that he will do whatever it takes to get Apple's cost structure down to the point where it breaks even on annual sales of $9 billion. "Our priorities are that first and foremost we have to be profitable," Amelio told a crowd at Macworld Tokyo in late February.

4 Improved morale. Amelio inherited a workforce emotionally battered by seemingly unending bad news. Amelio set up informal kaffeeklatsches with randomly selected non-managerial employees to establish that he was open to ideas from all levels. According to Wayne Meretsky, technical lead for Mac OS 8, "What's so refreshing working with Gil is he's doing what I'd expect a rational, mature leader to do—listen to our team and ask probing questions. Short term, he's followed our team's recommendations on going ahead with the program." On April 19, Amelio gave a speech that was broadcast to 15,500 employees world-wide that did a lot to solidify morale. "He said all the right things and really fired up the troops," one listener told The Wall Street Journal.

The top 35 things Apple's new CEO has done for you since taking control.

Mac OS, potential clone manufacturers will be able to work with one company for all their needs, whether hardware or software. On May 6, Apple licensed the Mac OS to IBM in a deal that's similar to Motorola's. According to Jesse Parker, director of segment marketing in IBM's Microelectronics Division, "IBM at various times had discussed the possibility of licensing the Mac OS from Apple. However, it wasn't until Gil Amelio joined the company that discussions began to proceed more quickly. While Gil was not directly involved in the day-to-day negotiations, it was clear to me that his influence and direction helped move things along."

6 Reorganized Apple. Previously, Apple was organized by both geography and functionality. While there was a central R&D group that created and marketed all products, there were also three divisions that marketed and sold products in the Americas, Europe and the Pacific. The geographic divisions were further broken down into segment marketing groups, such as consumer and education divisions. Confusing, no? Amelio has streamlined Apple's organization, dividing it into product groups based on hardware, software and alternate technologies. Sales and marketing functions are no longer split between products, geographies and segments but are contained within their corresponding product group. All major divisions report into either the Chief Operating Officer or the Chief Technology Officer—both of whom report to Amelio.

7 Trimmed workforce. On January 17, Spindler announced that Apple would lay off 1,300 of its 17,200 employees during the next 12 months. When Amelio took over he stated, "We have to do a little housecleaning early on," and on April 17, announced that an additional 1,500 employees would be let go. This number isn't as Draconian as it first seems since it includes 1,100 at the Fountain, Colorado plant that are simply becoming SCI Systems' employees. While further layoffs aren't anticipated, they aren't out of the question, either.

5 Aggressively licensed the Mac OS. Since announcing its intention to license the Mac OS in September 1994, Apple has been roundly criticized for dragging its heels. No more. Amelio has promised to "aggressively license the Mac OS to serious players." For proof of Apple's new willingness to license the Mac OS, look no further than two deals that were initiated prior to Amelio's arrival, but consummated with his very strong support. On February 19, Apple announced that Motorola's Computer Group had licensed the Mac OS and will sublicense it with the computers and motherboards it supplies to other manufacturers world-wide. In the past, Apple insisted on controlling all licensees, a policy that forced potential licensees to deal with Apple for the OS, and other vendors for the hardware. By allowing Motorola to sublicense the

8 Moved some manufacturing out of house. On April 4, Apple sold its manufacturing facility in Fountain, Colorado for an undisclosed amount to SCI Systems of Huntsville, Alabama, the world's largest electronics contract manufacturer. Under terms of a three-year agreement, SCI acquires the plant, property and inventory. Since 1991, the 360,000-square foot facility has manufactured subassemblies and finished computers. SCI intends to retain the majority of the 1,100 employees, assume responsibility for manufacturing Apple products and is open to the idea of manufacturing clones at the plant. "This arrangement offers Apple an opportunity to reduce both our product costs and inventory carrying costs," says Fred Forsyth, Apple's senior vice president for Power Mac Products.

9 Heightened visibility. When Amelio joined Apple, he promised to spend at least half of his time meeting with customers, analysts, developers, channel partners and other figures outside Apple. "I think that we have been in some ways too quiet," Amelio explains . "We need to talk about where we are and where we are going as a company, and we intend to do that more vigorously in the future so that our incredibly loyal customer base can understand what they can expect from us." Amelio is already much more visible than Spindler ever was. Spindler rarely made public appearances and when he did, he severely limited questions. In fact, Spindler never spoke at a Macworld Expo. In contrast, Amelio gave the keynote address at Macworld Tokyo after only a few weeks at Apple.

Copland faatures to be in Systam 7.X.

10 Killed eWorld. During the January 23 shareholder's meeting, Spindler promised to change the fledgling eWorld (in two years of operation, its membership base never exceeded 147,000 users) from a proprietary, commercial online service, to one that is Internet-based, and specific to Apple's target customers. Within weeks of Amelio taking charge, Apple abandoned this strategy and announced that eWorld would be turned off for good at midnight, March 31. Explaining such bold actions, Amelio says, "If it's necessary to shoot one of the lead buffaloes in order to send a message to the rest of the herd, you'd better be prepared to do it."

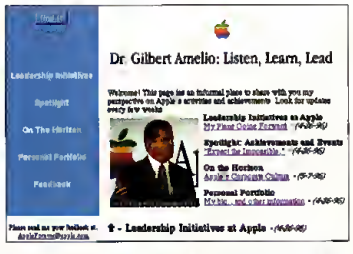
11 Announced support for Newton. Early in his tenure, Amelio admitted that the Newton "has been less than wildly successful" and asked, "does the world really need another computing surface?" This led many to speculate that the much-maligned Newton might fall under the cost-cutting ax, but a reprieve seems to have been issued from the highest office in Cupertino. Amelio was heard singing the praises of Newton at the WWDC, and he intends to reposition the Newton as an Internet platform.

More support for Newton.

12 Focused on the Internet. On March 19, Amelio promoted chief scientist Lawrence G. Tesler to a newly created position: vice president of Internet platforms.Tesler is chartered with ensuring Apple's leadership as an Internet platform vendor.

13 Established a Web site. As if to underscore his personal commitment to the Internet, Amelio established a Web site called Dr. Gilbert Amelio: Listen, Learn, Lead (http://www2.apple.com/leadership).

14 Gave away System 7.5 Update 2.0. When System 7.5 Update 2.0 was released in March, it was available via mail order for a $13 shipping and handling charge, or free from various online services. However, demand was so great that downloading the massive update severely taxed online sources. Acting upon the recommendations of a task force established by Amelio, Apple waived the $13 charge through May 31. As an added bonus, people who had already placed orders but had not received their disks were not charged and their checks were returned. This undoubtedly cost Apple millions in lost revenue, but bought the company untold goodwill.



Set up a Web sita so he can post comments and get feedback.

15 Dedicated to restoring consumer confidence. Speaking at Macworld Tokyo in February, Amelio said "The biggest challenge we face right now is getting consumer confidence back again, getting people a little more comfortable that Apple is going to be around for a long time to come." To that end, Apple implemented an unprecedented Repair Extension Program for the 5200, 6200 and 6300 series Macs and the 5300 and 190 series PowerBooks. Apple will repair or replace units with specific problems for up to seven years from the date Apple stops manufacturing these models.

16 Hired George Scalise as CAO. Before Amelio took charge, Apple was suffering from a serious brain drain, with at least 14 vice presidents either jumping ship or being forced out in the past year. Amelio has taken steps to fill those slots with competent, trusted managers. For example, on February 29, Amelio hired George M. Scalise, an executive vice president and chief administrative officer from National Semiconductor, to become Apple's executive vice president and chief administrative officer—a newly created position. "At a time in Apple's history when flawless execution is particularly important, he will be a valuable addition to our management team" Amelio says. As CAO, Scalise will handle administrative functions that are outside day-to-day operations, marketing, sales and finance, freeing Amelio to focus on technology, market and product areas.

17 Expanded Apple Developer Relations (ADR). Recognizing the importance the developer community plays in Apple's long-term success, on April 12, Amelio expanded ADR to provide developers with much-needed technical and business resources. ADR consolidates several developer functions into one coherent entity led by Heidi Roizen, the former CEO of T/Maker and a director of the Software Publishers Association. "Developers are the lifeblood of the Macintosh," Amelio says. "Apple must deeply integrate the development community into its global mission, and this new reporting structure is a logical step in that direction."

18 Promised financial support for developers. Amelio is putting Apple's money where his mouth is. Amelio has given ADR vice president Heidi Roizen $20 million to promote Mac developers, by, for example, gaining more retail shelf space for Mac products. Amelio has also pledged $18 million to provide better Mac programming tools, and he has promised a deep reduction in the prices developers pay for Apple products. Finally, he has pledged to help small developers find financial aid.

19 Hired Marco Landi as COO. On May 21, Amelio promoted the head of Apple's European operations to executive vice president and chief operating officer for the entire company. At Apple only a year, Landi has distinguished himself by refocusing Apple's European division on customer satisfaction and market segmentation. He has streamlined Apple's European operating costs, made its business units more competitive and rebuilt distribution channels. If Landi performs well, he may be Apple's next CEO: he's following the same career path as Spindler.

20 Working with IBM to develop a PowerBook. In May, Amelio stated that Apple and IBM are jointly developing a Mac-only subnotebook computer that both companies will bring to market.

21 Assumed head R&D role. When David C. Nagel, Apple's senior vice president, resigned on April 26 to become president of AT&T Labs, Amelio assumed the role of Chief Technical Officer. Whether Nagel's departure is a good thing depends on your perspective. To be sure, Nagel had a tremendous amount of knowledge and responsibility, but he had been widely criticized for failing to get Copland development on track. Unlike John Sculley, a marketing man at PepsiCo., who drew laughs of derision when he appointed himself chief technologist, Amelio has a very strong technical

background—he holds 16 patents and earned his Ph.D. in physics from the Georgia Institute of Technology.

22 Promised Copland features in System 7.X. During his speech at the WWDC, Amelio promised that although Mac OS 8 (nee Copland) would be delayed until mid-1997, "we need to pull some of these Copland features into System 7.5" in an interim release code-named Harmony. Furthermore, he hopes to "linearize" the development of the Mac OS, releasing key elements as they are completed, rather than holding them back for "mega event" releases. Apple has only released a few details about Harmony: it is slated for release by year-end and will likely include OpenDoc, Cyberdog, QuickTime, QuickDraw 3D, V-Twin (Apple's search technology) and tabbed folders.

Greatly improved all communications.

23 Increased minimum RAM to 12MB. In May, Amelio promised developers that all new Macs would ship with at least 12MB of RAM, up from the current 8MB minimum, but prices would not increase as a result.

24 Announced a simplification of the product line. During his speech at the Seybold Conference in February, Amelio told the audience "We need to simplify the product line. We need to simplify that a lot, because complexity costs money." He has directed Apple employees to reduce the number of models by 50 percent in the next 12 months, reduce the number of motherboards from 9 to 5 (then down to 2 or 3 for the entire product line), and reduce the number of Mac OS variations. By standardizing the hardware, Apple reduces its technical support and parts management burdens, makes it easier for developers to test products for compatibility and gives consumers a more coherent product line from which to choose.

A huge Internet push.

25 Suspended stock dividends. In its February 12 filing with the SEC, Apple stipulated that "no dividend has been declared for the first quarter of 1996, and the board of directors does not anticipate that dividends will be declared in the near future given the financial condition of the company." This was bad news if you were counting on the 12-cent dividend that Apple had paid out quarterly since fiscal 1987, but a necessary evil; Amelio doesn't expect to return Apple to profitability for at least a year and therefore needs to conserve cash reserves which dropped to $592 million on March 29 from $1.1 billion at the end of 1995.

26 Hired Fred Anderson as CFO. On March 7, Amelio appointed Fred D. Anderson, Jr. to the position of executive vice president and chief financial officer. The financially troubled Apple had been without a CFO for five months—the post had been vacant since October 1995 when Joseph Graziano resigned after a boardroom showdown with Spindler. Anderson was previously vice president and chief financial officer at Automatic Data Processing.

27 Hired Jane Risser as Treasurer. On May 7, Amelio promoted Jane Risser to the position of vice president and treasurer. Risser had been Apple's director of corporate finance.

28 Began mending fences with Microsoft. Bill Gates claims he tried to meet with Spindler for more than a year. Amelio recognized that it was unhealthy to have such a poor relationship with the largest software developer in the world and the developer of the most popular Mac applications. So, on March 20, Amelio flew up to Microsoft's Redmond, Washington headquarters and spent two hours with Gates discussing ways their companies could work together. To further the relationship, Apple evangelist Cindy Hanson is moving to Seattle to work more closely with Microsoft.

29 Controlled the flow of information out of Apple. Amelio took over in February 1996, after Apple posted a loss of $69 million in the first fiscal quarter. But that pales in comparison to the second quarter loss of $740 million announced on April 17. Even though Apple had originally estimated a loss of $150 million, Wall Street hardly blinked and Apple's stock remained steady. Amelio had managed to put a good spin on the news.

30 Announced Apple-branded Pippin. Amelio has announced that Apple will ship its own Internet-oriented version of the Pippin. So far the company has not released details on availability or pricing.

31 Promised a limited-edition 20th anniversary Mac. During his opening speech at the WWDC, Amelio said that Apple would produce a 20th anniversary Mac in a limited edition of 20,000 units. No other details were offered, but the 20th anniversary of Apple's incorporation is January 3, 1997. We hope this model will be more significant than the Woz edition of the Apple IIGS, which was distinguished only by Woz's name embossed on the front of the case.

32 Committed to Firewire. Amelio has announced Apple's plans to incorporate Firewire—a high-speed serial bus developed at Apple—in the Pippin platform and Mac by 1997. Firewire offers a fast real-time digital connection for consumer electronic and computer peripherals. "We expect to make the transition to Firewire over the next year by fully supporting third-party adapter cards in our operating system software and by bundling cards in configurations of our desktop machines," says Howard Lee, senior vice president of the Servers and Alternate Platform Products division.

33 Joined the Network Computer Coalition. On May 20, Apple joined with IBM, Netscape, Oracle and Sun Microsystems to set guidelines for a new generation of low-cost, easy-to-use network computer (NC) devices. Called "NC Reference Profile 1," these open guidelines are designed to make multimedia Internet computing as ubiquitous as telephone and television services, and at the same time challenge the Wintel stranglehold on the PC market. Apple hopes to ship an NC-compliant version of the Pippin this year, followed by NC devices based upon the Mac OS and Newton in 1997.

34 Overcame NIH Syndrome. For years, Apple has arrogantly ignored many advances in the PC market, dismissing them as inferior simply because they were "not invented here." Amelio recognizes that Apple must embrace promising new technologies, regardless of their origins. To that end, Apple has recently licensed Sun Microsystems' Java programming environment, Natural Intelligence's Roaster development tools and Adobe's Amber technology.

35 Committed to OpenDoc and Cyberdog. Developers routinely criticize Apple for not sticking with its technology plans. Amelio is pushing an Internet strategy based upon cross-platform, open standards. At the heart of the strategy are OpenDoc and Cyberdog. Amelio has garnered a commitment from IBM to develop a Windows version of OpenDoc by year's end. In addition, Apple released Cyberdog 1.0 to developers, and plans a consumer version for later this year.

Committed to key Apple technologies.

When not digging into the accomplishments of Apple CEOs, Owen W. Linzmayer enjoys brokering Middle East peace negotiations, performing cold fusion experiments and attempting to install Microsoft Office.

Internet Visionary

What Is Apple's Internet Guru Going to Do for You?

by Cheryl England

Recognizing the importance of the Internet to Apple's long term viability, Gil Amelio appointed Larry Tesler, Apple's Chief Scientist, to the newly created position of Vice President, AppleNet last March. Tesler's got a big job ahead of him as Apple, Microsoft, Sun Microsystems and other giants all struggle to make sense of the Internet. Does he have the vision it takes to pull off a successful strategy for Apple?

IT'S A BIG JOB, but someone's got to do it. Larry Tesler is responsible for overseeing the creation of Internet products such as Cyberdog, forging business alliances and making sure that all of Apple's products take advantage of the Internet.

Tesler's background alone is enough to convince you that he's well-suited for the job ahead. He was a researcher at Xerox's think tank, the Palo Alto Research Center from 1973 to 1980. While there, Tesler was one of a group of people that showed Steve Jobs the interface for Smalltalk on the Alto computer, an experimental project that included many of the features such as a mouse and a graphical interface that Jobs would later use in the Mac.

Following his stint at Xerox, Tesler led application and interface development for the Lisa, Apple's overpriced predecessor to the Mac. Since then, Tesler has held various senior positions at Apple, including vice president of the Advanced Technology Group, vice president of the Newton Group and chief of the Advanced Concepts Group in Apple Internet Services.

To Tesler, the Internet is the culmination of the 1990's paradigm of computing: computers are no longer isolated productivity tools, but are machines that enable people to actively acquire, use, create and share information. A nice thought, but how does he plan to make the Mac the leader in the Internet revolution? And what will he do to make it possible for you to extend the reach of your Mac? Here's what Tesler has to say.

Larry Tesler, the Enthusiast

FAVORITE MAC: Power Mac 8500
MAC TASKS: E-mail, Web surfing, presentations, spreadsheet work, video editing.
MAC HOBBIES: Tracking his family history using Leister Productions' Reunion and the Internet
FAVORITE WEB SITE: He's not saying.
FAVORITE APPLE MEMORABILIA: An eggshell dipped in 18k gold that was given to him at the opening of the Singapore manufacturing plant in 1988. During the Bay Area's 7.1 Loma Prieta earthquake in 1989, the egg fell from a high shelf and landed, unharmed, in Tesler's chair.

MA: What will Apple do to integrate the Mac with the Internet?

LT: We're going to make it easier to access the Internet right from the Mac OS and we're going to make it easier to create Web sites. We'll also take the ease of use of AppleShare and make it available with Internet protocols. So, for example, people could share files over the Internet, do remote access from a PowerBook to an office through the Internet and publish Web pages right out of a folder on a Mac without needing a separate server.

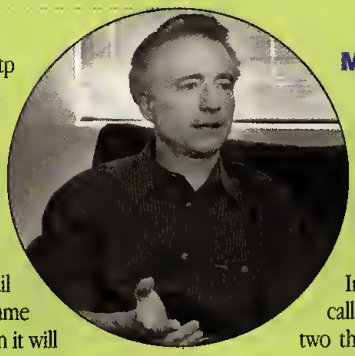
MA: What will you do for people that want to set up a dedicated Mac server, for example, if they need to have their Web site up and running 24 hours a day?

LT: We'll continue to add value to our server products. We'll support new standards in the industry and integrate more functionality so that customers can build the best, most-attractive and highest-performance Web sites available for the price.

MA: When you say that you'll make Internet access easier, do you mean you'll simply bundle America Online with new Macs?

LT: We'll definitely bundle AOL, the Apple Internet Connection Kit and Cyberdog in different combinations with the Macintosh, but we mean more than just bundling. We just released Cyberdog and with Cyberdog you can have a folder in the Finder that has icons for documents. Some icons can be CyberItems. If you double click on a CyberItem, it will go someplace on the Internet. So, for example, you could take a URL for a Web page which is also represented by an icon in Cyberdog and drag it into a folder on the desktop and then double click on it and it'll go into the Web browser and take you to the site. Not only can you put a Web

URL on a CyberItem, but you can also put gopher, ftp and an e-mail address on a CyberItem. In that regard, Web access and other Internet access is already available in the Finder.



MA: How will CyberItems help you manage your e-mail?

LT: You can create a folder for your friends' e-mail addresses. You can put icons with each person's name into the folder and when you double click on an icon it will open a new mail message addressed to that person.

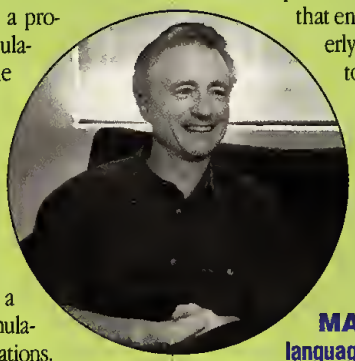
MA: How will Apple move beyond Cyberdog in integrating the Internet with the Mac OS?

LT: In the future, we intend to integrate at least some functions that are currently in Cyberdog directly into the Finder. But the exact features and shipping dates are currently being worked out. By the time Mac OS 8 ships, people will consider the Internet to be tightly woven into the fabric of the Finder.

"You'll be able to publish Web pages right out of a folder on your Mac."

MA: What is Apple doing to make it easier to build a Web site?

LT: We're working with great software developers and we are creating bundles to minimize set up and configuration. And we are developing some unusual tools ourselves. We developed a program called Cocoa that lets young students build simulations. The connection with the Internet is that with one menu item, you can create a folder on your desktop that's ready for a Web server. You can put your simulation there and you'll be able to show it to other people on a Web page. We're hoping that students will publish simulations on the Web and trade them like trading cards, to create a huge publishing library of educational and fun simulations.



The important thing is that you can interact with a simulation on a Web page and you can send the simulation by e-mail to other people who can make modifications.

MA: Where can I get a copy of Cocoa?

LT: Cocoa's not shipping yet, although we hope to get it done this year.

MA: MacAddict is integrating the print magazine with a CD-ROM and a Web site. Where do you think CD-ROMs fit in with the Web?

Students will publish simulations on the Web and trade them like trading cards.

LT: Today you can buy CD-ROMs that have Web sites on them and browse them with any Web browser. It's so easy that some people are authoring CDs using HTML because they know everyone has a player.

CDs are great because they hold a lot of information and they are pretty fast. But the information on them has a time value. Using the Internet in conjunction with a CD-ROM gives the user supplementary information that's more current. Though getting the information from the Web will require some connect and download time.

Lots of multimedia authoring is targeted at CDs and the Internet. Standards like QuickDraw 3D, QuickTime, QuickTime VR and ShockWave are being incorporated in CD- and Internet-friendly forms. In the future you'll be able to get the same multimedia content from a CD or the Internet.

MA: What is Apple doing to allow QuickTime movies show up in real-time on the Internet?

LT: Most people have slow Internet connections and there are a lot of Internet traffic jams. Servers are overloaded and a lot of people turn off the graphics option in their browser because they don't want to wait for images to download. At Internet World in April, Apple showed a technology called QuickTime Fast Start Movie Player. Fast Start does two things: first, it allows a QuickTime movie to appear directly in the Web page; there's no need to launch a helper application or even to open another window. Second, the movie starts playing while the download is still in progress so the user doesn't have to wait until the entire file has arrived before they can see video.

Your experience with multimedia on the Internet becomes completely different with Fast Start. We think users will become more receptive to multimedia Web pages. There are tens of thousands of Web sites that use QuickTime. With Fast Start, we expect to see an even wider adoption of QuickTime.

MA: What does Fast Start require to work?

LT: Fast Start requires a Navigator 3.0 plug-in that Netscape will bundle and that will also be available on Apple's Web site. On the server, no special software is required. We're making available a utility that ensures that the QuickTime movie is formatted properly for Fast Start before you put it on a server. The tools that make QuickTime movies add meta information to the beginning, middle or end of the file. To take advantage of Fast Start the meta information must be at the beginning of the file. Our utility lets a Webmaster convert files so that the meta information is in the right place. You can drag a folder of movies onto the utility and it will batch process them.

MA: You've said that Java is one of your favorite languages and that Apple will put Java everywhere—the OS, Pippin, Newton...

LT: Java is not only a language but also a set of software libraries. Many companies are growing those libraries to include a lot of the functions in personal computer toolboxes. Initially, Java will be used to create applets for animation and for interactive forms and user interfaces that are more sophisticated than those that can be created in HTML alone. Longer term, as Java improves and gets faster, people will be able to write complete applications in Java. In addition to working on many different OSes, these new applications are likely to be more reliable because of Java's technical characteristics that avoid some of the most common software bugs.

MA: Some people say that the Internet is becoming the OS. Do you agree?

LT: The Internet is a new application platform like DOS, Apple II, Mac OS, Windows and Unix. To say it is the only OS is even further off the mark than saying Windows is the only one. ◼

CHERYL ENGLAND edits MacAddict for a living, but lives for scuba diving.

Open Doc rocks

BY DAVID REYNOLDS

Apple's latest rumblings about OpenDoc are more than mumbo jumbo. This technology will forever change how you interact with your Mac.

It's 3 a.m. and you have to finish the Café Club newsletter. Actually, you have to start the newsletter, and have it finished by 9:00 a.m., or the other members will beat you to death in a caffeine-induced rage. Self-preservation is high on your list of priorities, so you start up your Mac, a thermos of coffee by the keyboard to fuel you through the morning.

You double-click the newsletter stationery document that the past club secretary created on his Windows machine. When it opens (without a translator), you drag an audio CD controller from your parts bin onto the bottom of the document. First things first—the newest CD by Cracker arrived yesterday and this is your first chance to listen to it, so you fire up the tunes.

The Disc includes OpenDoc and OpenDoc applications. The Web Site links to more applications.

NEWS

A cold night in Braz

Hot Mocha Coffee

A delicious recipe for chocolate delight

Ingredients

- 20 g chocolate
- 20 ml coffee liqueur
- 0,75 dl hot coffee

How to decorate

- softly whipped cream
- chocolate grains

How to prepare

1. Melt the chocolate.
2. Add the coffee liqueur.
3. Pour over the hot coffee.
4. Serve in bowl-shaped glasses.
5. Decorate with softly whipped cream and chocolate grains.

Hot Mocha Coffee

elicious recipe for
ocolate delight

edients

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ml coffee liqueur
75 dl hot coffee

to decorate

ftly whipped cream
ocolate grains

to prepare

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Bean prices may soar

A surprise cold front through the southern mountainous regions of Brazil last night caught coffee farmers by surprise.

The unseasonably cold weather froze some buds and may have destroyed up to 30 percent of this year's coffee crop.

The extreme cold may also have killed up to 20 percent of existing coffee plants and has injured many more.

"It's a disaster," Ernesto Trujillo, a Brazilian coffee farmer, said. "I don't know if I can recover from this.

Analysts expect coffee prices to climb steeply as supply shrinks. A live feed of coffee futures is tracked in the graphic on the upper right hand corner of

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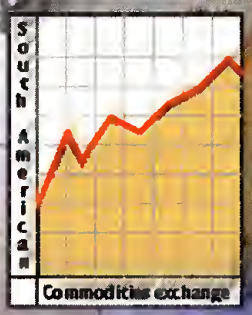
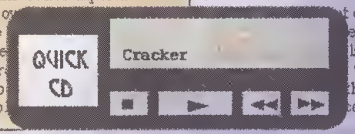


Coffee futures • 3:23 a.m.
Live data feed



With OpenDoc,
you can create complex documents, such as this one, without ever opening an application. Instead, open a container document and drag parts onto it, adding only the functionality you need.

Now the serious work can begin. You drag the club's logo onto the top of the document, nudge it to the left a bit, then drag a story about the rising cost of coffee onto the newsletter. Deciding that a graphic would help balance the page, you drag a line graph onto the document, linking it to a live Internet data feed on coffee commodity prices. While you drag a recipe for hot mocha coffee onto the newsletter, the coffee cost bar graph continually moves, updating itself as the new data flows in. You notice that the graph colors don't match the logo, so you click on it and drop in some nice earth tones to match. Finally, you drag a movie of the club's president onto the document (she'll be explaining what kind of caffeine rehab the club will offer to its members if coffee prices go through the roof.) The CD has only played through four songs, and the newsletter is ready to go out.

You drag the CD-player part onto the desktop where it appears as a separate document and delete the CD player part still on the newsletter. (You don't want to send your CD-player with the newsletter, and you sure don't want to stop the music.) Save the newsletter, drag a "Send Newsletter" button onto the Cafe Club document and push it. The newsletter has now been sent over the Internet to all 327 members on the mailing list, complete with the live link to provide constantly updated stock prices. Although your members use all different kinds of operating systems (Mac OS, Windows and even AIX), they'll all be able to access the document without a translator. You did it all without opening a single application. You did it all without stopping the CD-player. It's 3:37 a.m. Time for bed—if you can get to sleep.

IT'S COMING FASTER THAN YOU REALIZE

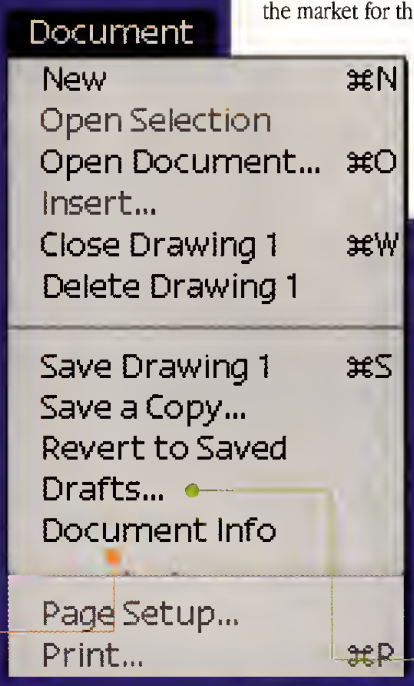
This is the promise of OpenDoc. You will focus on documents rather than applications; putting any kind of data into a document will be as easy as dragging it into place. Documents can be accessed on any computer that has OpenDoc installed, whether it's running the Mac OS, Windows, OS/2 or AIX, and these documents can contain all kinds of links, including links to the Internet. Because you'll be able to pick and choose the parts you want to use, those bloated applications—that take 50 disks to install and have 3,000 features that you never use—may be a thing of the past. Instead, you will merely drag the tools you want to use onto a document. And because applications are small, you'll be able to quickly download them from the Internet whenever you want.

We don't yet live in an OpenDoc world, but it is coming—and soon. Apple released version 1.0 of OpenDoc earlier this year, and version 1.0 of OpenDoc's best friend, Cyberdog, was released in mid-May. OpenDoc is the software that allows parts to work together; Cyberdog, a kind of extension to OpenDoc, provides the glue that lets all OpenDoc parts access the Internet. Apple is also releasing KickStart, a package of editors and parts that provide writing and drawing functions. Several third-party vendors, including Claris, WorldSoft, Digital Harbor and Adrenaline are also working on OpenDoc container applications and parts.

Even more importantly, OpenDoc figures prominently in Apple's efforts to revitalize its operating system, which has been on the market for the better part of a decade. Not only will OpenDoc ship as an Apple Extra on new systems starting this summer, it will also be integrated into Mac OS 8 (formerly known as Copland) when it ships in mid-1997. Eventually, we expect that the Finder will become the ultimate container. Imagine working with Control Panels as parts.

A Menu of Differences

When you start using OpenDoc, you'll notice differences from the standard Mac interface. At first, these changes are a bit disconcerting: Where's the File menu? Why isn't there a Quit command? Here's what you'll see and how it works.



THE DOCUMENT MENU ►

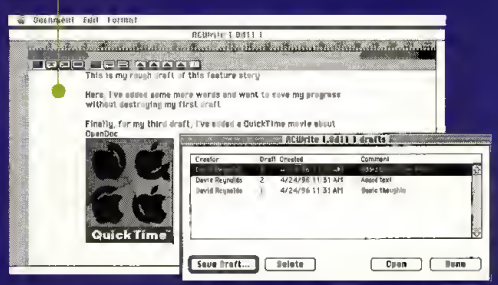
The Document menu replaces the traditional File menu. You can open documents as usual, but to include parts in a document you need to drag them onto the document or use the Insert command. The Quit command is gone: there are no applications running under OpenDoc, so there is nothing to quit. Simply close a document's window with the Close command or click on the close box; the document will ask if you want to save changes.

DRAFTS... ▼

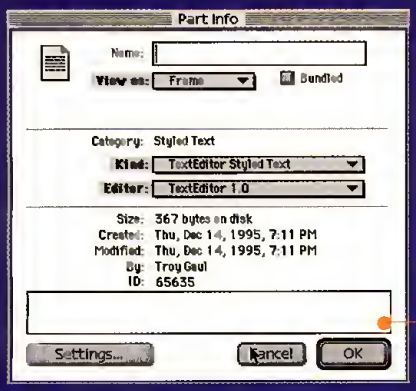
The Drafts item is particularly handy if a document must go through several revisions before it is complete. This command lets you save a series of drafts in the same document and allows you to call up a previous draft at any time. When a previous draft is called up, it appears in a separate window, but it's still part of the same document. When a Save A Copy command is executed on a document with drafts, the copy will contain only the last draft saved. Drafts make file sizes larger, but not by much.

◄ DOCUMENT INFO

Document Info lets you access a series of settings for your document. The Document Info dialog box also contains an important sub-dialog box, the Size dialog box. This is where you can control how much RAM the document consumes while it's open and whether the document has its own memory setting or uses the default OpenDoc memory setting.

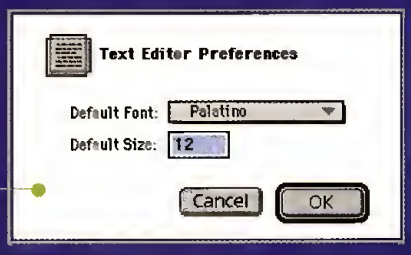


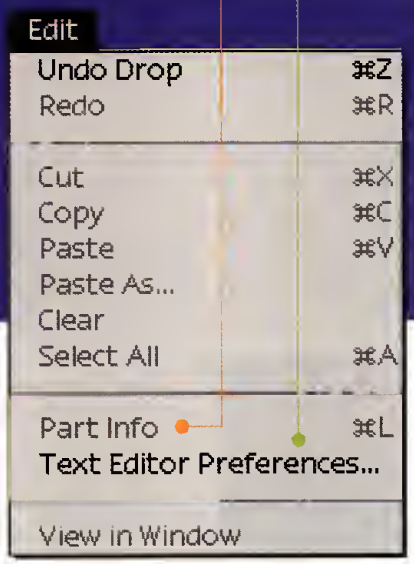
Differences in the Edit Menu



THE EDIT MENU ▼

The Edit menu has changed, but not dramatically. A few items-Part Info, Text Editor Preferences and View In Window-have been added at the bottom of the Edit menu to handle OpenDoc. The View In Window command makes a separate window which you can resize and move around in order to see hidden data or the entire part.





PART INFO ▲

The Part Info dialog box looks like the Document Info box, but it pertains only to the active part. You can name the part, change the kind of data it can hold and select the editor to handle its data. This dialog box also contains some information about the part itself.

TEXT EDITOR PREFERENCES ▲

The Preferences item lets users set defaults for particular parts, like default line width or font. Preferences dialog boxes can be very simple, like this one, or very complex.

You could move them in and out of the Finder or other container applications as needed. Before you know it, you will be interacting with your Mac in a whole new way.

PARTS IS PARTS

OpenDoc, a flavor of "component software," works through parts and editors. Parts are the bits of software that you drag onto documents. Text, movies, drawings, web browsers—all of these things can be parts, and any OpenDoc part can be put into an OpenDoc document. Since parts only contain the data they need to do their jobs, they tend to be small—those currently available range from 5K to 540K, averaging somewhere around 6 to 8K. Parts can live either as stand-alone documents (just drag a part into an open window or onto the desktop and OpenDoc will create a new document to hold the part), or they can live in OpenDoc stationery, which acts like non-OpenDoc stationery except that it contains OpenDoc parts. (Stationery documents, such as those used in ClarisWorks, open as new, untitled documents, but instead of being blank they contain custom text, data or format settings already stored in them.)

Editors let you see and change OpenDoc parts. When a KickStart Draw part is dropped onto an OpenDoc document, the KickStart Draw editor handles the drawing that you do in that document. When text is dropped into a document, the text editor handles any changes to that text. Viewers are yet another kind of editor that let you view the data in an OpenDoc document but don't let you change it. A movie that's dropped into a document will probably be played but not edited, so a viewer would make more sense than an editor to handle a movie part. Because of their limited functions, many OpenDoc viewers will probably be free; however, many OpenDoc editors will probably need to be purchased. Editors and viewers live in the System Folder in a folder named Editors; if they're not there, OpenDoc can't show or edit the data in that part.

When OpenDoc comes across a part that doesn't have an editor installed, it first looks for a viewer for that part. If it doesn't find one, then it looks for an editor or viewer that can read or translate the data (like a plain text editor reading a text part created by a word processing part). If OpenDoc can't find anything at all to translate the data, then it lets the user know that it can't read the data, but that there is data to be seen if the right editor can be found. (See the sidebar "On the Other Side" for more information on what you need in order to view and edit OpenDoc documents.)

Kantara Development, by way of marketing and distributing OpenDoc parts, has created two OpenDoc parts, PM Finder and PM Fetch (PM stands for Part Merchant), to help users find missing OpenDoc editors and viewers over the Internet. If OpenDoc can't find the right editor, PM Finder asks the Part Merchant Internet server to find the right editor or viewer. If it's available, then the PM Finder allows you to purchase (if necessary) and download the editor. PM Fetch is an OpenDoc button part that opens a Web browser and takes you from the document with the missing part to a URL (kept in the button) where you can find more information or download the right editor.

WORKING WITH OPENDOC

You won't have to wait long to start working with OpenDoc: Apple's KickStart will be ready to go in early August. Akin to MacDraw and MacWrite (the applications that shipped with the original 128K Macintosh), KickStart includes KickStart Draw and KickStart Write, which will let you create drawings and write text in any OpenDoc document. Also included in KickStart, as well, is a QuickTime movie viewer, a QuickDraw 3D viewer, an Image viewer that shows PICT, JPEG, GIF and TIFF pictures, a sound annotation part, KickStart Sticky (stickies that stick to your document) and a Button that will hold text, sound or Open

OpenDoc is much more than just a software gadget—it's also the future of the Mac OS. But Apple needs to overcome a few hurdles to get there.

Scripting Architecture scripts. The KickStart kit is designed as a package to get you started in OpenDoc, not as the be-all, end-all of OpenDoc parts.

One step beyond KickStart will be container applications which can hold OpenDoc parts. For example, the next release of ClarisWorks will be a container application. You'll be able to drag-and-drop OpenDoc parts onto a ClarisWorks document, but in all other respects, the new release of ClarisWorks will behave like a non-OpenDoc application: double-click on a ClarisWorks document and ClarisWorks launches.

A ClarisWorks document with an embedded OpenDoc part will be usable with or without OpenDoc. OpenDoc users with the right editors will see the document as it was created and will be able to edit all of the parts in the document. Non-OpenDoc users will see a PICT image of the part, showing what it looked like when the document was last saved. For graphics uses, the simple PICT image will serve almost as well as an editable file would.

Suppose you embed a Route 66 mapping part in an invitation to show the way to your house. If you've got ClarisWorks, OpenDoc and the Route 66 viewer, you'll be able to use the map on the document as you would any OpenDoc part. If you don't have OpenDoc, then you'll get a document with a PICT image of the map to your house.

With OpenDoc-aware applications, such as ClarisWorks, you'll be able to add only those features you want. For example, you could add a part to ClarisWorks that creates a table of contents in a ClarisWorks document. This represents one of the key selling points of OpenDoc and of component software in general: it allows developers to concentrate on their strong points, and it allows you to include only the features you need for each project. This keeps application costs down, development time short and application sizes small.

Developers are hard at work on full OpenDoc parts as well. Digital Harbor is working on a word processor part called Wav, which does some nifty word processing (like dynamic text wrap and cursor placement) and can hold other parts or be embedded in other parts. Wav also makes use of something called a Folder Bar, to store OpenDoc parts, among other things. Adrénaline Software is working on a spreadsheet part that creates slick rotating 3D graphs using QuickDraw and can handle Excel data and 3D objects dragged from the clipboard. Other parts include ACWrite, a simple word processor from Advanced Concepts that supports pictures and paragraph formatting; CD-Part, a simple audio CD player from Linne Data AB; CyberTerm, a basic Telnet client from AttachMate; and MainView, a QuickDraw 3D viewer from Amplified Intelligence.

These parts aren't meant to displace programs like Microsoft Word or Excel, or at least not yet. They do however, add some great functionality for the users of spreadsheets and word processors, allowing them to do some things that just aren't possible otherwise, in Word or Excel. Other third-party vendors are also busy creating OpenDoc parts. (See The Disc for some sample parts.)

DISSECTING THE DOG

Cyberdog is an OpenDoc oddity. On the surface, it looks like a browser. When you open the Cyberdog Starting Point document, you get a document with several buttons that allow access to a Web browser, newsgroups, e-mail and the Cyberdog notebook. Cyberdog's browser handles graphics, frames and HTML with some aplomb. The e-mail portion of Cyberdog has a fast search engine and multiple in-boxes for mail, allowing you to keep track of your mail with ease. The Cyberdog Notebook is an OpenDoc part that is meant to store URLs, newsgroups, mail messages and other Internet information. All of these abilities combined make Cyberdog an adequate, but not great, way to surf the Net.

Cyberdog wasn't meant to be a browser, however. Behind the Cyberdog Starting Point are functions that allow any OpenDoc part to access the Internet through Cyberdog. This is where Cyberdog gets its bite. Web addresses, mail messages and FTP sites can all be dragged around like OpenDoc parts (because Cyberdog makes them OpenDoc parts), and they can be dropped in any OpenDoc document. That means you can embed a Web page in your Wav document or drop an FTP site in a word processor file that allows people to download software. Cyberdog also handles Cyberbuttons. These OpenDoc buttons hold things like URLs that will connect to that Web site when they are pressed. The Cyberdog starting point is just an OpenDoc document with some text, graphics and several Cyberbuttons dropped on it.

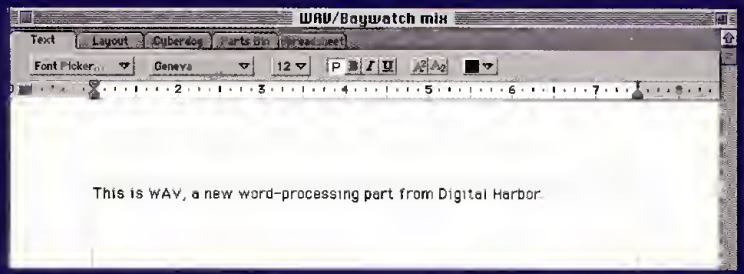
Cyberdog has been generally misunderstood. As a browser it's so-so; as a glue to bind the Mac

Making a Document the OpenDoc Way

OpenDoc lets you create incredibly complex documents using just a few parts. Here, we created a document that includes text, a spreadsheet, live 3D graphing and a full Internet connection using just four parts: Adrénaline's Baywatch spreadsheet part, Baywatch Nights' graphing part, Digital Harbor's Wav word processing part and Cyberdog.

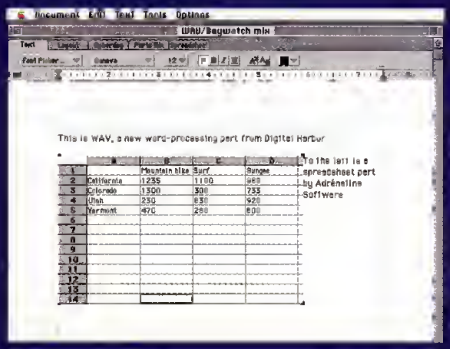
Step 1.

Wav works like any word processor with great features like dynamic word wrap and an insertion point that follows the cursor.



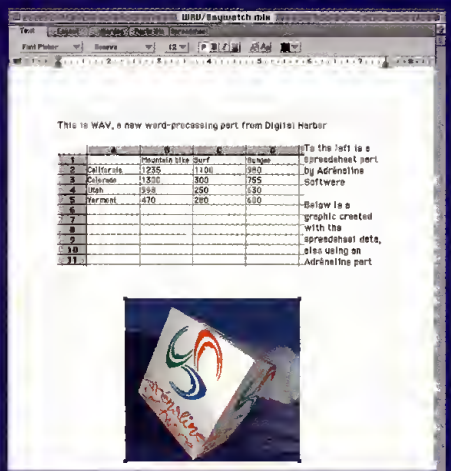
Step 2.

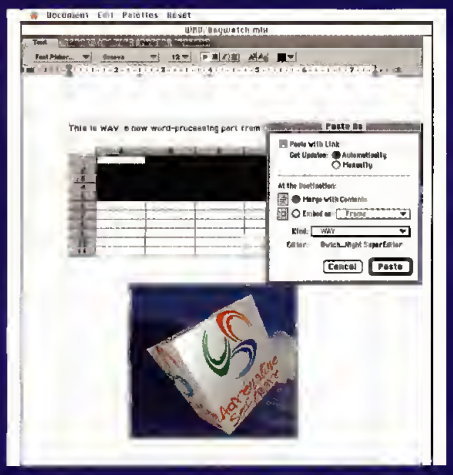
Wav is an OpenDoc container part, so it can hold other parts. Here, the Baywatch spreadsheet part is placed in a Wav document. To enter spreadsheet data, drag it in.



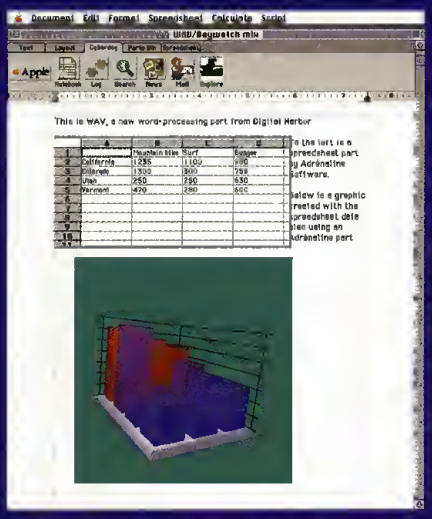
Step 3.

Baywatch Nights, another Adrénaline part, creates 3D graphs of Baywatch data. The part below the spreadsheet is Baywatch Nights without any data linked to it.

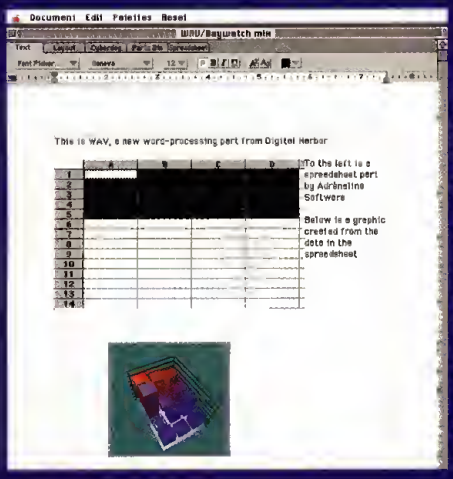




Step 4. To link data to Baywatch Nights, select the data and then select the Baywatch Nights graph. Choose Paste As. When the automatic updates option is marked, the graph reflects changes in the spreadsheet.



Step 5. After pasting in data, a 3D bar chart appears in Baywatch Nights. Like a QuickDraw 3D item, the graph can be rotated, scaled and moved in space. You can even replace bars with new 3D items.



Step 6. Finally, you can access Cyberdog through Wav's folder tabs. Now the Internet is linked to your document, providing live data.

On the other side

You've made a great document with text, a spreadsheet, a 3D graph and a link to the Internet and you want to send it to a friend. But, hmm, we're not dealing in the world of applications any more. What does your friend need to see or edit the document? Unfortunately, she needs several programs.

Since the document was created in Wav, your friend needs a Wav editor or viewer to even open it. If neither is available, OpenDoc will look for one that can act as a substitute, but it probably won't find one since Wav is a complex word processor. Currently, a "Translation Services Unavailable" message would appear on screen, and that would be that. Your friend couldn't open the document. If, however, your friend had Kantara's Part Merchant installed, that program would try to find the Wav editor or viewer on the Internet so that it could be downloaded and used to open the document.

What if your friend had the Wav editor and a Baywatch viewer, but no Baywatch Nights viewer? She could open the document, see and edit the text and see, but not edit, the spreadsheet data. But the graph wouldn't show up. Instead, she might see an error dialog box or a generic icon. And without Cyberdog, she couldn't access the Internet database.

To see:	You need:
The spreadsheet	The Wav viewer and the Baywatch viewer
The graph	The Wav viewer and the Baywatch Nights viewer
The text	The Wav viewer
Static Internet data	The Wav viewer
Live Internet data	Cyberdog
To edit:	
The spreadsheet	The Wav viewer and the Baywatch editor
The graph	The Wav viewer and the Baywatch Nights editor
The text	The Wav editor

OS to the Internet, it's great. Any OpenDoc document can connect to any Internet content through Cyberdog. Developers no longer have to build Internet connections into their software; instead, all they have to do is make their software OpenDoc-aware, and they get the Internet in the bargain. Cyberdog will ship with the Mac OS, but like KickStart, Cyberdog isn't meant to be the be-all and end-all of Internet in OpenDoc. Spyglass and Netscape are making their own OpenDoc parts that interact with the Internet.

OpenDoc 1.0.4 requires System 7.1.2 and a 68030 or better processor to run—but realistically you'll want a PowerPC-based Mac running at least System 7.5.3. Right now OpenDoc needs at least 4MB of available memory to run comfortably. Apple hopes to make it require less, but don't look for any dramatic decreases.

OpenDoc uses memory in two ways. First, the OpenDoc extensions don't take up RAM until you open a part. When you do, OpenDoc grabs a minimum 1.8MB of RAM and adds it to the system memory. Exactly how much memory OpenDoc grabs can vary widely: the Cyberdog notebook sucks up about 4.5MB of RAM and adds it to the system allocation. Second, the document itself requires some elbow-room, so OpenDoc allocates this memory as a separate chunk, much like today's applications. The default setting for OpenDoc documents is 2,000K, but some take more and some take less, ranging from 300K or so to over 5,000K. You can adjust a document's RAM requirements in the Document Info dialog box. OpenDoc gives up both chunks of memory when the document is closed.

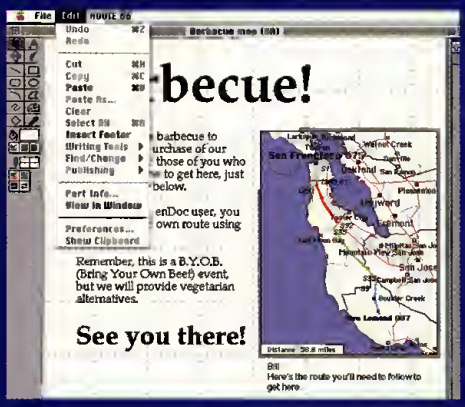
With parts, stationery, editors and viewers running around, your hard drive could easily become a mess. Editors and viewers must stay in the Editors folder in order to be used. Organizing stationery, parts and documents, on the other hand, will take more work. Organizing parts and stationery by kind (graphics, movies, text or Internet, for example) might help, and documents will fit in with whatever filing system you have already devised for your files. Apple plans to provide another organizational answer to the problem with something called the parts bin, giving you a specific place to store parts.

OpenDoc also opens up the 327-fonts-per-page problem. In the early days of desktop publishing, people crammed as many fonts as they could into their documents, because… well, because they could, and because it was just so much fun. OpenDoc may spark some of the same kind of excess—it's so easy to include parts, you may figure why not just drag a few more parts onto your document? Moderation in all things, Grasshopper.

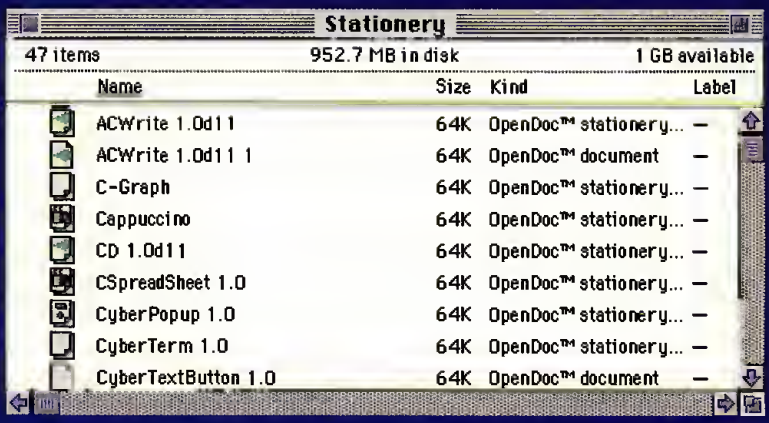
The OpenDoc Deception

If you're not paying careful attention, you might not realize you're working with an OpenDoc document. For example, Cyberdog works a lot like a standard application, until you realize that the buttons are actually OpenDoc parts that have been dropped onto a Cyberdog document. Here's how to spot an OpenDoc container or part.

LOOK FOR THE OUTLINE ▼
OpenDoc parts that are embedded in an OpenDoc-aware application such as ClarisWorks will display an outline when they are active. Also, when an OpenDoc part is active, the Edit menu changes to include OpenDoc-specific choices such as Part Info and View in Window.



VIEW FILES BY KIND ▼
You can also view files by Kind and the System will note which items are OpenDoc stationery, which are OpenDoc documents and which are standard applications or files.



EXPERIMENTING WITH OPENDOC

We've included OpenDoc and several sample parts on The Disc in this issue so that you can get a taste of what working with OpenDoc is like. You can also download other parts from the Web, as well as a tutorial (check out our Web site for links). While OpenDoc is shipping, and fairly stable, many of the OpenDoc parts out there are not. If you want to experiment with OpenDoc, be prepared for lots of restarts and an occasional Fatal Error (which won't kill you, but it is a sign that bad things are about to happen). To keep your current system and data safe from corruption, we suggest setting up a startup drive strictly for OpenDoc. You can use a Zip drive, Syquest drive or a hard drive with nothing on it. Here's what to do:

1. Start with a clean, empty drive (format it if you can).
2. Install System 7.5.3 from known good disks. Try to keep your extensions to a minimum to avoid conflicts. If you want to play with parts that use the Internet, make sure you install MacTCP and any other software you might need for an Internet connection.
3. Install OpenDoc and any editors and parts that you want to try.
4. Make this drive your startup drive.
5. Restart. Now you're ready to take OpenDoc out on the road.

DO A GET INFO ►
Alternately, you can select an OpenDoc part and do a Get Info on it. Under Kind, you'll see the part listed as an OpenDoc document or stationery.

THE PROMISE AND THE REALITY

OpenDoc is much more than just a software gadget—it's also the future of the Mac OS. Apple, through OpenDoc and Cyberdog, can include the Internet in Mac OS 8 and, eventually, Apple can turn the System into the ultimate container. But Apple has to overcome a few hurdles before it gets to this point: the company has to make sure that OpenDoc works on Windows machines, it must garner the full support of developers and it must remain committed to OpenDoc.

OpenDoc's closest competitor in the component software game is Microsoft's OLE 2.0 (and its Cyberdog counterpart, Active X). But OLE doesn't work as elegantly as OpenDoc and Active X is not yet available for the Mac. Although OpenDoc parts and containers will be able to work with Microsoft OLE components, Apple is seeking an even better solution: IBM has committed to developing OpenDoc for OS/2, AIX and Windows.

OpenDoc is developing a loyal following among software developers. Small developers are passionate about OpenDoc, saying that it gives them a more level playing field to compete with larger software makers and say that it may be the beginning of a revolution. Adobe says that it will do something related to OpenDoc by the end of the year. Other large developers such as Macromedia, however, do not plan to support OpenDoc, preferring instead to push their own versions of component technology—a quest we think is doomed to fail, because of the open nature of OpenDoc. OpenDoc is an open standard, and Apple (and others) have provided source code and support for developers, so it's easy for developers to support OpenDoc.

OpenDoc may indeed be the beginning of a revolution. It allows you to work with your Mac in a more natural way, focusing on your document rather than the application used to create that document. We can't wait until the promise of OpenDoc becomes the reality of the Macintosh. ■

DAVID REYNOLDS has over seven years of experience in both print and broadcast journalism, and has a long-time fascination with technology. He also takes his two dogs for a walk twice a day in San Francisco's Golden Gate Park.

Brave New Browsers

Navigator Explorer Mosaic Cyberdog

by Kathy Tafel

The Web reaches out and touches the voyeur in all of us: the part that really, really wants to know just what Sho Kuwamoto had for lunch. And we expect our browser to display that lunch in surround sound smell-o-vision.

Back in 1994, our expectations were lower. We anxiously awaited a version of Mosaic that would "do forms". Netscape Navigator fulfilled this desire first, and even gave us features we didn't know we needed. Finally, we could cruise around, look at a friend's home page, check out the Cool Site of the Day, shop and find out about almost any subject, secure in the knowledge that our new browser could handle it all.

It's a bit different now. It's almost impossible to keep track of what a browser supports: plug-ins, Java and an HTML free-for-all constantly keep us on our toes. Of the first browsers, only the National Center for Supercomputing Applications' (NCSA) Mosaic and Netscape Navigator are still available for general use.

Navigator quickly grabbed the mindshare of Internet surfers, leaving the others far behind. As a measure of its popularity, shortly after going public, Netscape's stock sold for more than Microsoft's. But more indicative of how important browsers have become is the fact that both Apple and Microsoft have developed browsers that are more than just applications—they are products that are central to these two giant companies' Internet strategies.

Despite their importance, browsers are still basically free—except for Netscape, each company literally gives away its browser. That's because, in the long run, whoever has the largest market share will be in the best position to control Internet standards. Here's a look at the state of today's four top browsers: NCSA Mosaic, Netscape Navigator, Microsoft Internet Explorer and Apple's Cyberdog.

FIND CYBERDOG, Internet Explorer and NCSA Mosaic on The Disc.

Mosaic

NCSA Mosaic: The Standards Bearer

As the first graphical browser, Mosaic was the killer app that started the Webolution. The original version shipped in November 1993—and the product has gone through a new release each year from version 1.0 in '93 to the current version of 2.0.1 last October. Mosaic 3.0 (which was in beta as we wrote this) is functionally equivalent to Navigator 2.0 although by the time Mosaic 3.0 ships, well, Navigator 3.0 will also have shipped, upping the feature ante.

But Mosaic isn't really trying to play catch-up to Navigator, or even participate in any "whoever has the most features wins" game. Mosaic is a stickler for adhering to HTML standards. You won't see a version of Mosaic using tags that can't be seen by other browsers. (Note that there are two versions of Mosaic: NCSA develops the free version and Spyglass develops a commercial version.)

This attention to standards, however, does not prevent Mosaic from including innovations, but the innovations are in the form of features that let you use the Web in a Mac-friendly way. For instance, instead of giving you a configurable toolbar like one you'd find in a Windows-esque program, Mosaic allows you to create menus to which you can attach Hotlists. Mosaic can also speak selected text on a Web page (you'll need the Speech manager software included with System 7.5 Update 2.0 to make this work). Additionally, Mosaic lets you annotate Web pages with either text or audio stickies.

NCSA is not in a position to dictate the direction of the Internet or how the operating system interacts with it. Mosaic doesn't have a huge installed base, like Netscape Navigator, and NCSA doesn't control an operating system like Apple does. However, Spyglass has announced support for OpenDoc in its version of Mosaic, meaning that the company can concentrate on making Mosaic a powerful, easy-to-use browser that you can use instead of Cyberdog's default HTML viewer. Overall, Mosaic preserves the spirit of HTML—a platform-neutral language that lets you view the Web in any way you choose. Most of us abandoned Mosaic when Navigator was released. Take another look; you'll be surprised.

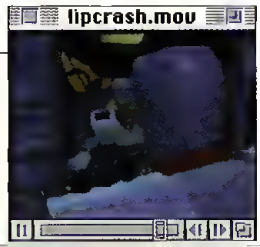
Functionality

Mosaic does not have built-in support for many data types, instead relying on helper applications to do the heavy lifting. Instead, Mosaic focuses on interpreting HTML and helping you navigate the Web. As Thomas Redman, the lead engineer for Mosaic at NCSA, says, "the world can live without lots of fluff in Mosaic." If Spyglass weren't turning the commercial version of Mosaic into OpenDoc parts, NCSA would.

1. Our spiffy logo in GIF format.
2. Animated GIFs are rendered as still images.
3. These images and accompanying text are properly formatted in a table.
4. Mosaic's 3D elements in the form are still not up to snuff.
5. Selected speech can be spoken using the Text-To-Speech software included with System 7.5 Update 2.0.
6. Annotations can be added to HTML pages; these are only displayed on your Mac.

7. This image was handed off to the helper application, JPEGView, for display.

8. Likewise, this QuickTime movie was handed to MoviePlayer.



Bookmarks

The best thing about Mosaic's Hotlists is that you can break them into separate lists: unlike other browsers, you're not forced to use one huge Hotlist. But Mosaic's Hotlists are harder to manage than those of other browsers. Other browsers store lists in readable HTML files; Mosaic's are in a proprietary file format so you can't open them in other browsers. The Hotlist window is not as intuitive as Internet Explorer's Favorites window, and some of the buttons do not have keyboard shortcuts.

You can edit the URL in the Hotlist window, but to edit the name, you have to open a separate dialog box.

Netscape Navigator: The Innovator

Since its inception, Netscape has pushed the boundaries of Internet standards. It grabbed almost 84 percent of the browser market by making extensions to the HTML standard: colored text, backgrounds, tables and other subtle and not so subtle (BLINK!) additions. Had no one used these extensions, Netscape would not have become the most popular browser on the planet. But because the additions added pizzazz to Web pages, Webmasters everywhere used them.

Netscape's innovations, however, come at a price. Netscape announces new versions of Navigator before you even have a chance to use all of the current version's features. You might have actually figured out how to organize bookmarks in version 1.x, but version 2.x's implementation is even more Byzantine.

Web page designers barely get a chance to think about which features they need and should implement before they have even more features from which to choose. For instance, just as Webmasters got the hang of making tables look presentable, Netscape announced frames. Like lemmings, everyone implemented them, without thinking about how much screen real estate they waste. It's new, it's Netscape, it's now!

Similarly, the rush is on to use embedded plug-ins. Plug-ins supposedly extend browser functionality transparently. But plug-ins are not transparent or easy to use. When you go to a page that has an embedded plug-in that isn't in your plug-ins folder, you get a dialog that asks if you want information on that plug-in. If you don't install the plug-in, you see an icon of a broken plug-in. Plus, you have to figure out how much memory the plug-in needs and manually increase Navigator's memory allocation in the Finder.

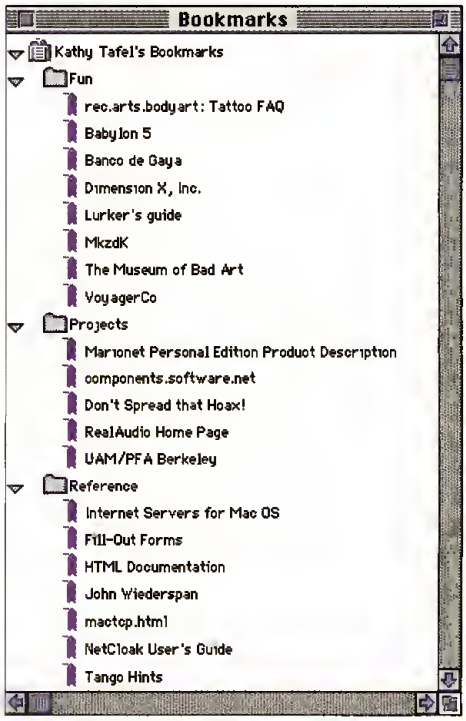
These innovations force Navigator to host many services the OS usually provides: it creates windows to display plug-ins and routes keystrokes to them. But Navigator is not an OS—it's an application. Maybe even Netscape is realizing this—it has announced that Navigator will become an OpenDoc part. One thing's for sure: Netscape will use any technology that promises to make browsers do more than just browse.

Functionality

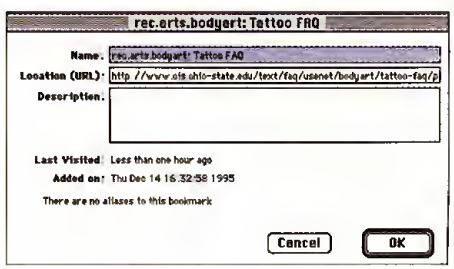
Navigator supports every kind of multimedia you'd want to put on a Web page. But don't try this at home. Navigator will crash unless you devote 24MB of RAM to it.

1. Our spiffy logo in GIF format.
2. Animated GIFs.
3. These images and accompanying text are properly formatted in a table.
4. The form's formatting is perfectly acceptable.
5. Navigator 3.0's Live3D plug-in can animate models.
6. Java applets are embedded into the page.
7. Pictures are also embedded into the page. You'll have to scroll to see it all.
8. Macromedia Shockwave movies are embedded.
9. Navigator 3.0 includes a QuickTime plug-in.

Bookmarks



Netscape must have hired Rube Goldberg to implement Navigator's Bookmarks. Navigator forces you to use three menus to add and edit Bookmarks. And although Navigator tries to emulate the Finder with its Bookmarks window design, the design is not well-implemented. First of all, the triangle disclosure hoojits are not properly aligned with the folders. And what are those purple things supposed to be? In addition to the aesthetic miscues, the editing is not intuitive.



While you can drag any item anywhere on the list, you can't edit the name of an item from the list. You have to choose Edit Bookmark from the Item menu. Some of these interface decisions make a certain logical sense. From a usability standpoint, they just stink.

Explorer

Microsoft Internet Explorer: The Copier

Enter the OS vendors. Unable to let anyone have 84 percent of any market, Microsoft developed Internet Explorer. Having discovered that Mac users were not exactly happy with the compromises that Microsoft made to ensure that Word 6.0 was cross-platform, Microsoft built Internet Explorer from the ground up as a Macintosh application. Internet Explorer is a solid browser that, like Mosaic, has features its Windows counterpart doesn't, and uses a lot of Apple technology.

Internet Explorer provides most of the functionality of Netscape 2.0—except for frames and JavaScript support—and Microsoft plans to add these later this year. Internet Explorer can use Netscape plug-ins and it's the first Mac browser to have a built-in VRML viewer. And because Internet Explorer takes advantage of the Thread manager and Open Transport, it downloads pages on a Power Mac in record time.

Internet Explorer looks and feels like a true Mac product. You can choose from among three Toolbars and can manage bookmarks (Internet Explorer calls them Favorites) using a Finder-style interface. You can edit the names of Favorites just as you would in the Finder and can move Favorites to a new place simply by dragging them. Microsoft has created a really solid Macintosh browser.

However, aside from this, Internet Explorer has a few quirks. Try this: surf over to the Microsoft Network home page at http://www.msn.com and customize it. If you try to do too much, Internet Explorer crashes when rendering the page.

Microsoft does not plan to build an Internet strategy around the Macintosh. The company has a technology that it created called ActiveX which works like Netscape plug-ins and Java applets. (ActiveX is a subset of OLE, Microsoft's competitor to OpenDoc.) ActiveX works on Windows now, but don't expect Microsoft to make it work on the Mac anytime soon. Internet Explorer is a great Macintosh application, but it won't break any new ground—at least not on the Mac.

Functionality

Internet Explorer is a solid browser and tends to be more stable than Navigator, although it still crashes enough to raise your blood pressure. It adheres nicely to Mac interface conventions, but it will always play catch-up to Navigator's features.

1. Dur spiffy logo in GIF format.

2. Animated GIFs are rendered as still images.

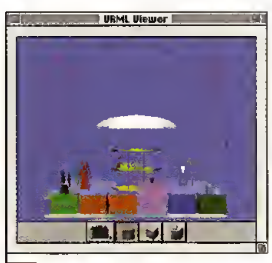
3. These images and the accompanying text are properly formatted in a table.

4. Explorer's 3D elements are a nice touch in the torm.

5. Internet Explorer could not display an image downloaded via gopher in the form.

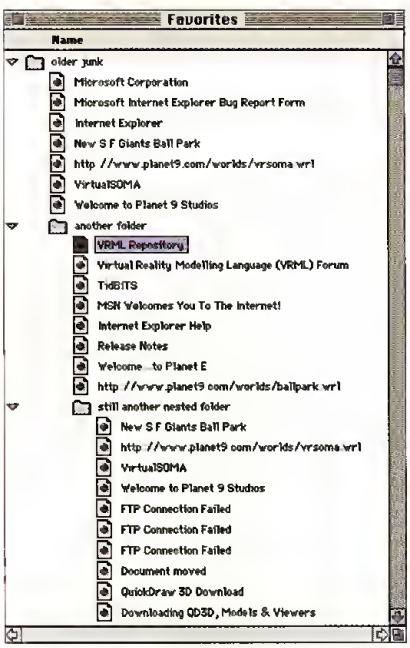
6. Internet Explorer can use any Netscape plug-in. This is a Macromedia Shockwave movie.

7. QuickTime movies are shown in a separate viewer.

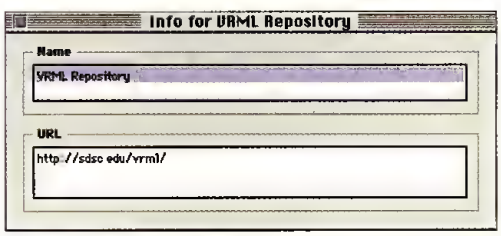


8. Internet Explorer uses a QuickDraw 3D Viewer to render VRML worlds (except those compressed in the UNIX .Z format).

Bookmarks



Internet Explorer provides the easiest way to manage bookmarks. The Favorites window behaves almost exactly like a Finder window. Create folders by typing Command-N and delete items by dragging them to the Trash. You can easily edit the name of a URL by highlighting it and then typing in the new name.



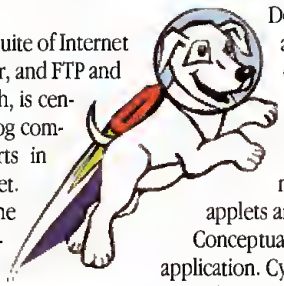
You can't, however, do everything from the main window. To edit the URL of a Favorite—not just the name—you must select the Favorite and then open an item into window by typing Command-I. Fortunately, most people need to edit the name of a Favorite far more often than they need to edit the address.

Cyberdog

Apple's Cyberdog: The Stealth Bomber

Where in the Web is Apple in all this? Having sat on the sidelines for most of the browser battle, Apple has quietly been working on technology that integrates the Internet into your desktop. While you won't see the true fruit of all this labor until the next release of the Mac OS, you can use it today in the form of OpenDoc and Cyberdog.

Cyberdog embodies two easily-confused concepts. It is a suite of Internet client components: Web browser, news reader, e-mail handler, and FTP and gopher clients. It is also an OpenDoc technology and, as such, is central to Apple's Internet strategy. You can replace any Cyberdog component with another and you can embed Cyberdog parts in OpenDoc documents linking those documents to the Internet.



As Internet clients, Cyberdog's default parts work fine. The parts do their job, and there are a few innovations that differentiate Cyberdog from the other browsers. Nonetheless, it will be hard for Cyberdog to catch up; other Internet clients are now on their second or third version. But that's okay—the real key to Cyberdog is OpenDoc. You'll be able to replace Cyberdog's browser with Mosaic or Navigator once they are reworked to become parts.

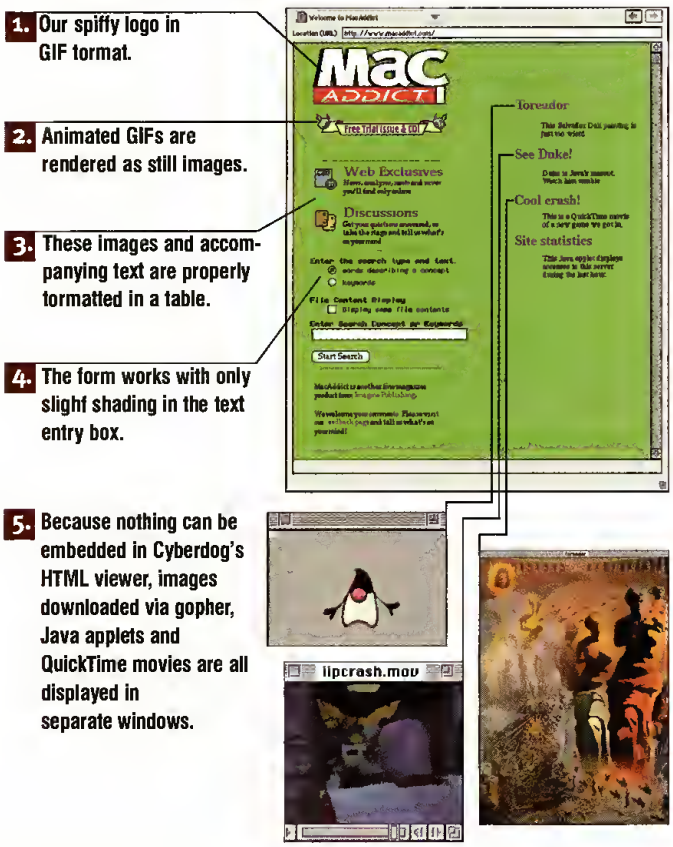
In the meantime, you can create documents that have collections of Internet information using Cyberdog's DocBuilder application. Documents can include newsgroups, e-mail addresses, FTP sites and Web sites which can be labeled with text and pictures. You can pass these "doguments" to friends like trading cards.

How does Cyberdog deal with Java and Netscape plug-ins? Apple and third parties are creating wrapper parts that hook Java applets and Navigator plug-ins into Cyberdog. The mind-blowing part is that with OpenDoc you can embed the applets and plug-ins into any document—not just Internet ones.

Conceptually, OpenDoc is a collection of plug-ins that doesn't need an application. Cyberdog makes it easy to add Mosaic or Navigator and to integrate them with the OS. Rather than wrapping you in a safe application while you browse, Cyberdog lets you use the Internet anywhere on your Mac. ■

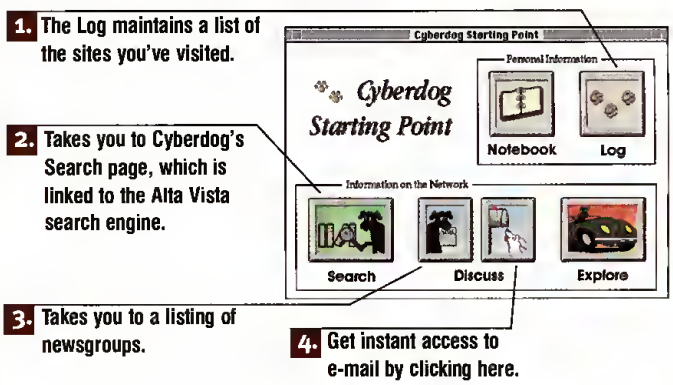
Functionality

You can easily add features to Cyberdog with OpenDoc parts. For example, ResNova's CyberJava part enables Cyberdog to interpret Java. Cyberdog is also fairly stable—it crashes far less often than the other browsers. But Cyberdog's HTML viewer could use work. It doesn't support frames and it doesn't render transparent GIFs correctly if they are placed on a background image. And non-native document types are rendered in a separate window.

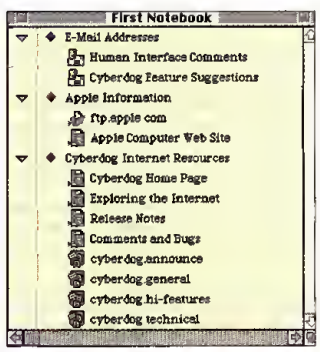


Bookmarks

Cyberdog is much more than a browser—it's a collection of OpenDoc parts for accessing the Internet. Thus, the concept of a home page doesn't work with Cyberdog—you have to open the Notebook and click on a particular CyberItem (an icon that represents an e-mail address or a URL) to open the browser. Or you can open sites using CyberButtons embedded in OpenDoc documents.



The Notebook looks like a Finder window, but doesn't act like one. Like the Finder, you can drag items wherever you like, including the Trash. Unlike the Finder, other controls reside in the Notebook menu (which is accessible whenever a notebook is the frontmost item). You can create new folders and items with commands in this menu, but there aren't any keyboard equivalents. To edit folders and items, use commands in the Edit menu.



Associate editor Kathy Tatel has used the Internet since 1992. She can't wait for the Internet backbone to support 56 million terrabits per second so that she can watch full-motion, surround-sound previews of the next episode of "Babylon 5".

STAND BY YOUR MAC:

25 Reasons Why the Mac is Better Than a PC

BY NIKKI ECHLER

In article <6428792.78942.com.au>, Get Facked <bigjerk@school.net.au> wrote:
>The Mac OS is a piece of @#$* Apple sucks. Die Apple!!!!!!!!!!!!
If you don't like it, dipwad, don't use it.
-F.U.

Lurking in the Mac advocacy newsgroup or browsing in alt.destroy.microsoft might leave you feeling like you've wandered into a bloody game of third-grade dodgeball. Battles rage out of control over which operating system is the most bug-ridden, waste of RAM ever to corrupt a computer. And the arguments, although frequently based on the "You shut up", "No YOU shut up" principle, are always passionate.

The thing is, everyone knows that the Mac OS could kick some serious Wintel butt if Apple would only find a strategy and stick with it. After all, Gates thought the Mac platform was so good he stole it and revived it as the Frankenstein's Monster of operating systems—Windows 95. While Win 95 may make the PC seem a little friendlier in comparison to the DOS regime or Windows 3.1, it still doesn't greet you at the door and lick your face like the Mac OS. In fact, it doesn't do a lot of things that the Mac does, or at any rate, it doesn't do them as well.

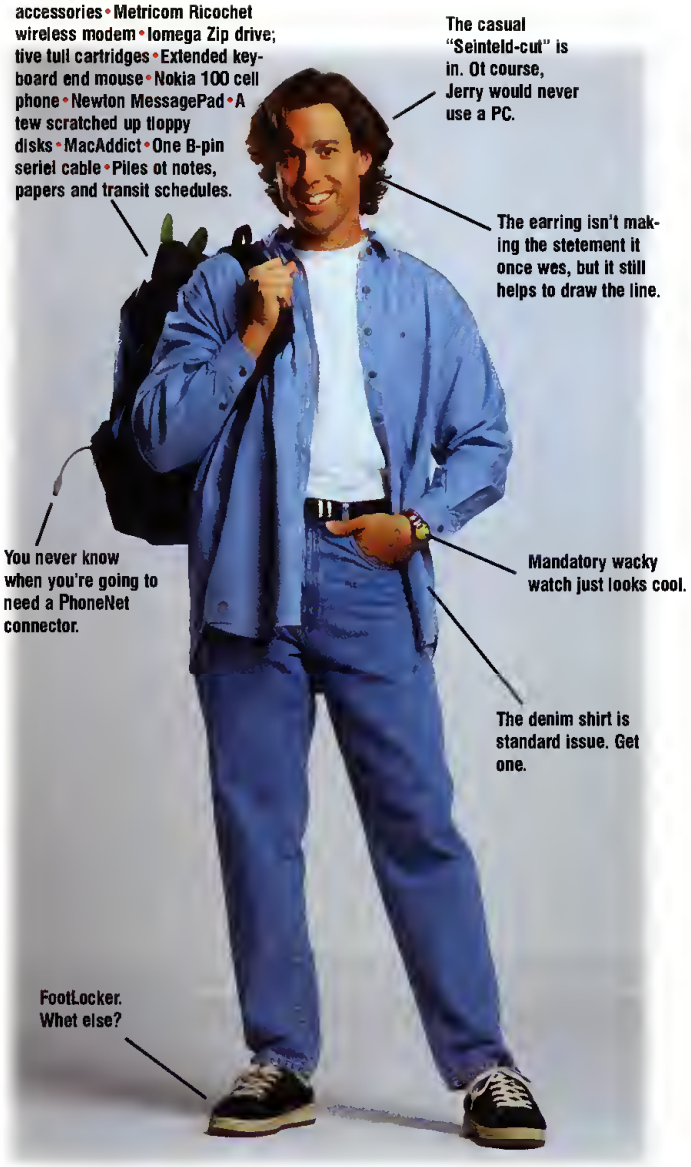
So, while Microsoft kicks itself for stealing the plastic spoons instead of the good silver, Mac loyalists should take inventory of what was left behind and celebrate. To get the party started we have compiled a list of 25 reasons why the Mac is still superior to Windows 95. Read it and weep, Microsoft.

Reason 1. Pop in a floppy and the Mac responds with an icon on the desktop that lets you know exactly where it is. Windows 95 plays hide-and-seek by sticking the floppy disk's icon on any one of your hard drives somewhere under the "My Computer" icon. Where's the floppy, where's the floppy… good boy!

Reason 2. The Mac is easy enough for a kid to use. Sixty-three percent of the computers in U.S. public schools are Macs, so many kids form strong, early attachments to the world's most lovable OS. Why hold back your children by making them use Windows?

TOP FIVE CHILDHOOD TRAUMAS

1. Death of a parent
2. Divorce
3. Changing schools
4. Loss of a pet
5. Being forced to use Windows



THE WINDOWS USER

HOBBIES: No time tor hobbies, still trying to install system.
SECRET SHAME: Has a Mac et home tor "the kids". Reelly, really liked Microsoft Bob.
BELIEF: Thinks Bill Gates is God.

THE MAC ADDICT

HOBBIES: No time tor hobbies, too busy spamming Windows-only developers.
SECRET SHAME: Still uses WriteNow tor word processing.
BELIEF: Thinks Bill Gates thinks he's God.

Reason 3. The Mac OS always launches a document with the application from which it sprung. Windows users, however, can't be sure the document and the application that created it will stay hitched. If Windows users move a document or a program to a different drive, the connection between the document and its creator application vanishes. Also, a Win 95 document can only be associated with one application, no matter which app created the file. A newly installed program can sometimes take over these ties so that documents no longer open automatically with the apps that made them.

Reason 4. All Macs ever made come LocalTalk-ready, making it easy to connect even a Mac Plus with the newest, top-of-the-line Power Mac using AppleTalk. With PCs, it's virtually impossible to connect older 80286 systems with newer Pentium systems. Also, connecting a Mac to an Ethernet network generally takes half the steps it takes to hook up a Wintel.

Reason 5. The Mac is not only hip, but also well-connected. You can daisy-chain up to seven SCSI devices, internally or externally, to a single port on the Mac. The typical Wintel machine does not include a port for connecting external storage devices. Instead, PCs have an IDE interface that only allows you to connect two internal hard drives. Worse, some low-profile PCs can only hold one internal hard drive: to upgrade your hard drive, you must completely replace the original one. About the only way around this dilemma is to buy a SCSI card to hook up external devices or buy a drive that can hook up to the PC's external—but slow—parallel port. PCs do support an EIDE interface that lets you connect up to four devices, but other than hard drives you can only hook up CD-ROM drives and a few tape drives.

ADD TO OUR LIST! Submit your "Why the Mac is better than the PC" reasons to our Web site.

Reason 6. DOS is a pain in the butt to use, and whether Windows users admit it or not, it's still there in Win 95, lurking and waiting. For example, when saving a file on a Mac, you can name it whatever you want. On a PC, if you don't follow the DOS rules and regulations—try including a question mark, back slash or various other non-letters in your filename—you could wind up with mysterious error messages that even Nancy Drew would find puzzling.

And woe be unto you if you run into a problem during startup. Say, for example, your PC Card isn't present and your system expects it to be there—you'll unexpectedly drop into good ol' DOS as the eerie sounds of the last laugh ring out from the Mac user at the other end of the office.

MAN SURVIVES WEEKEND OF TORTURE WATCHING WINDOWS START-UP

AFTER YESTERDAY AFTERNOON, I'M SURE THE "W" IN WINDOWS 95 STANDS FOR WAITING. Whenever my wife and I visit friends of hers, her friend's husband always wants to show me something on his computer. As an R&D manager in a large company that uses Macs, I'm supposed to be interested in computers on the weekend, no?

YESTERDAY WAS TERRIBLE. This guy wanted to show me his Windows laptop and how he connects to the internet. He had a PC Card modem and a Jaz drive.

1) HE TURNED ON HIS MACHINE AND DURING THE BOOT PROCESS IT FLASHED BETWEEN THE WINDOWS GUI AND A DOS SCREEN WHILE LOADING ALL KINDS OF STUFF. Then it stopped. "Oh yes, the Jaz drive has to be connected to the laptop," he says, "No problem, I'll go get it from my car and reboot."

2) AGAIN REBOOTING. Once in Windows, he switches to a DOS shell and launches a modem configuration tool to configure the modem. "Windows 95 doesn't recognize my modem, so every time I power off, I have to reconfigure the modem and then reboot without powering off. I should buy the new modem driver, install it and configure it and then Windows 95 will recognize my modem automatically," he says.

"Automatically?" I ask.

"Sure, because it worked in Windows 3.1 when I bought and installed the new drivers..."

3) AGAIN REBOOTING. He now calls up Netscape. "Oh No! I have to change the phone number, because I don't have to dial a '0' before the number, it's a direct line," he says. Netscape is already dialing, but the guy interrupts it. Yes, you guessed it, the dialing software freezes, leaves the modem in a strange state and.... yup, back to DOS again.... and reboot.

4) NO, I'M NOT KIDDING: 45 MINUTES LATER WE ARE AT HIS PROVIDER'S HOME PAGE. He clicks on a link and we wait. The computer is idle for a few moments and a kind of agent kicks in, telling us that it is going to scan the internal hard drive. Don't ask me why, but it started doing this and from then on the system became so slow that even the 14.4Kb modem was too fast for it and browsing became impossible.

5) FINALLY, MY WIFE CAME TO THE RESCUE: THE KIDS NEEDED TO GO TO BED. Now this is a good reason to have kids. Thank you Apple, without you, I would have lost all my hair years ago. —*Johan Coppieters (Oostende, Belgium)*

Reason 7. Although Windows 95 finally eliminated the eight-character limit for filenames, Windows 3.1 will translate long filenames back into it's own cryptic code, making filesharing between the two systems a task for the FBI. All versions of the Mac OS, on the other hand, understand 32-character filenames.

Reason 8. Games look and sound better on the Mac. "Every developer that I've worked with that has created the Mac version of a hit PC title, prefers the resulting Mac version over any other platform and it has to do with graphic fidelity, the quality of the sound and the overall look of the game," says Craig Fryar, MacPlay Talent Scout, former Apple Games Evangelist and co-author of the hit game Spectre.

Reason 9. The Mac is easier to set up than a Windows machine. A 10-year-old Mac user was pitted against the Editor-in-Chief of a major PC magazine in a contest at a recent Software Publishers Association meeting to see which platform was easiest to set up. The 10-year-old took 16 minutes, 15 seconds to get his Mac system up and running, while the Wintel expert clocked in at 26 minutes, 15 seconds.

Reason 10. AppleScript lets users, with even slight programming instincts, bend applications to their will with very little time or effort. With AppleScript, you can make applications work together in new ways, achieving the same effect as if you had created a custom program from scratch. To date, there is no PC equivalent.

Reason 11. QuickTime, an Apple innovation, was the first file format that allowed people to easily create videos, and cut, paste and otherwise edit them just like they could with any file format. To date, QuickTime still provides the easiest, best way for users to create videos that can run on Windows or Mac OS machines.

Reason 12. Macs are faster. Between their RISC-based processors and 32-bit applications (many Windows apps are still dawdling under 16-bit apps), the Mac leaves Wintel machines choking on its dust.

Reason 13. The Mac is still the first choice for creative types. Adobe's PageMill and SiteMill, tools that make creating and updating Web pages easier than watching an episode of "The Single Guy", were first created for the Mac. The initial code for PageMill was written for Windows, but market research showed that "the creative people were all using Macs," says Robert Seidl, who co-founded Ceneca Communications (the creators of PageMill). "It was a business decision for us, not a religious decision—our initial customers were on the Mac," says Seidl.

Reason 14. Mac designers wanting more pizzazz for their pages can easily make images pop off the screen thanks to Apple's QuickDraw 3D. While Windows users do have a 3D alternative, Direct 3D, it lacks a standard interface, so you can't copy and paste 3D objects into 2D applications. And, because the Windows 3D alternative doesn't support a standard file format, there's no guarantee that the 3D graphic you create in one program will open in another 3D application. Fortunately for Windows users, Apple plans to create a Windows version of QuickDraw 3D.

Reason 15. In 1995, Apple was granted 53 technology patents—more than any other computer company, according to Information Week.

Reason 16. "The Mac is largely responsible for the multimedia revolution. Apple's early adoption of CD-ROM drives and the creation of programs like Director, Photoshop and CodeWarrior have made the Macintosh the multimedia platform of choice. Also, delivering product to the Macintosh audience is a joy because they don't have the system

compatibility problems common to other platforms." —Bill Appleton, president of CyberFlix, creator of DreamFactory and SuperCard.

Reason 17. You may need Word for Windows if you're creating stodgy reports for the boss, but if you plan on doing anything even remotely creative you'll want a Macintosh. The Mac became an industry standard for graphics early on thanks to the grand slam combination of PageMaker, PostScript and the LaserWriter. Now the Mac is such an integral part of the creative process that even the art departments of many PC-based organizations, such as PC Computing, PC Magazine and PC World use Macs exclusively.

Reason 18. A true friend, the Mac can talk to you and recognize your voice through built-in PlainTalk and speech analysis. Wintel machines, however, remain speechless.

Reason 19. Macs speak a variety of foreign languages—you can format a floppy as a PC disk from your Mac, read foreign files, write to foreign disks, etc. PCs are like arrogant Americans who assume that everyone else should learn their language.

Reason 20. Wintel machines are easy prey to infection. More than 8,000 viruses exist for the PC, with 100 to 200 new bugs introduced each month, according to a spokesperson from McAffee, creators of anti-virus software—the Mac has succumbed to only 40 or 50 such deadly diseases in its history.

Reason 21. Windows 95 supposedly supports Plug and Play—a user adds in a Plug-and-Play compatible board and Windows will automatically configure it. But, for a variety of reasons, this does not always work, meaning that the user then needs to reconfigure the board's drivers—the very task Plug-and-Play was supposed to prevent. Mac users, on the other hand, simply need to click on the Installer application that comes with a piece of hardware and they are up-and-running.

Reason 22. Thanks to the overdesigned Windows 95 interface, it's hard to tell what's clickable and what's not. The interface elements that should be grabbing your attention, such as informative text and clickable buttons, fade into a swamp of flashy bevels and gratuitous grayscale decoration. Apple's restrained interface makes it much easier for Mac users to tell which parts of the screen they should be paying the most attention to.

TEACHER STRUGGLES WITH CD-ROM INSTALLATION IN TIME-WASTING TRAGEDY

I AM A THIRD GRADE TEACHER AND A DEVOTED MAC USER. The School Board purchased a Windows machine for my class and I was hoping that I could enjoy a fraction of the benefits of my Mac at home. Since I had added an external CD player to my Mac, I thought I could do the same on the Windows PC.

THE HARDWARE INSTALLATION WAS FAIRLY STRAIGHTFORWARD. The main difference was in the software installation. To get the CD player to play sound and video, you must:

1. **Install the player.**
2. **Configure the player.**
3. **Install the SoundBlaster software.**
4. **Add the CD sound drivers to your list.**
5. **Test the sound card, and choose the right settings. This required going in and out of DOS, and at least two reboots.**

SINCE THE SPEAKERS SUPPLIED WITH THE CD PLAYER CAME WITHOUT A POWER SUPPLY, I HUNTED UP SOME BATTERIES. When I tried to play the CD, I pressed play, but heard no sound. Silly me, the manual informed me of my mistake: "turn the ON switches to OFF, and turn the front power switches to ON". (There are two power switches on the back of the speakers, and two more on the front, and two volume knobs.) It turns out that all of the switches in the OFF position work just as well.

Total installation time: 2 hours, 20 minutes.

IN CONTRAST, INSTALLING MY MAC CD TOOK 3 MINUTES, INCLUDING REBOOT. The video and sound played perfectly with a click of the mouse. The Apple speakers came with a power supply, no switches, one volume knob. No fuss, no extra cost. —*Geoffrey MacLellan Winship (York, Ontario)*

BITE YOUR TONGUE:

Top Ten Things a MacAddict Would Never Say...

1. **Let me help you configure your autoexec.bat and config.sys files.**
2. **I can't be late for my Mac OS training class.**
3. **I work on a Mac at the office but I have a PC at home because it's so much fun to use.**
4. **It only took me two days to install my System 7.5 upgrade.**
5. **Which drive is that on? A? B? C? D?**
6. **It's as easy to use as a PC.**
7. **This desktop thing is too darn cute. I miss the good old command-line days.**
8. **I forgot which key I'm supposed to use to refresh the screen.**
9. **Instead of sending our kids to college, we upgraded our system.**
10. **Jeez, this computer sucks.**

Reason 23. Many Windows applications require uninstall programs to remove an application and all of its associated (and frequently invisible) files completely and safely from your hard drive. On the Mac, just about the only programs that force you to use an uninstall utility are those from Microsoft.

Reason 24. Type 11 errors are nothing compared to the bugs, incompatibilities and overall instability of Windows 95. While Mac upgrades are usually refinements based on old, reliable code, the Windows revamps result in a totally new product. Although Windows 95 runs better than Windows 3.1 overall, users are still suffering growing pains.

Reason 25. Troubleshooting on a Mac often means popping in Casady & Greene's Conflict Catcher or Norton Disk Doctor and following doctor's orders. Troubleshooting on a Windows machine means you need to know your IRQ from your DMA and your CONFIG.SYS from your AUTOEXEC.BAT.

Nikki Echler is ashamed to admit that her first computer was a Leading Edge PC. It was never used.

reviews

A 180MHz Mac, the Color QuickCam, a handful of games and more.

Power Computing Compatibles

FREAKIN' AWESOME

SPIFFY

YEA, WHATEVER

BLECHI

DEVELOPER: Power Computing
CONTACT: 800-370-7693; http://powercc.com

PowerCenter 120
PRICE: $1,895 (for 8MB of RAM, 850 MB hard drive configuration)

PowerCenter 150
PRICE: $2,995 (for 16MB of RAM, 1GB hard drive configuration)

PowerTower 180
PRICE: $4,195 (for 16MB of RAM, 2GB hard drive configuration)

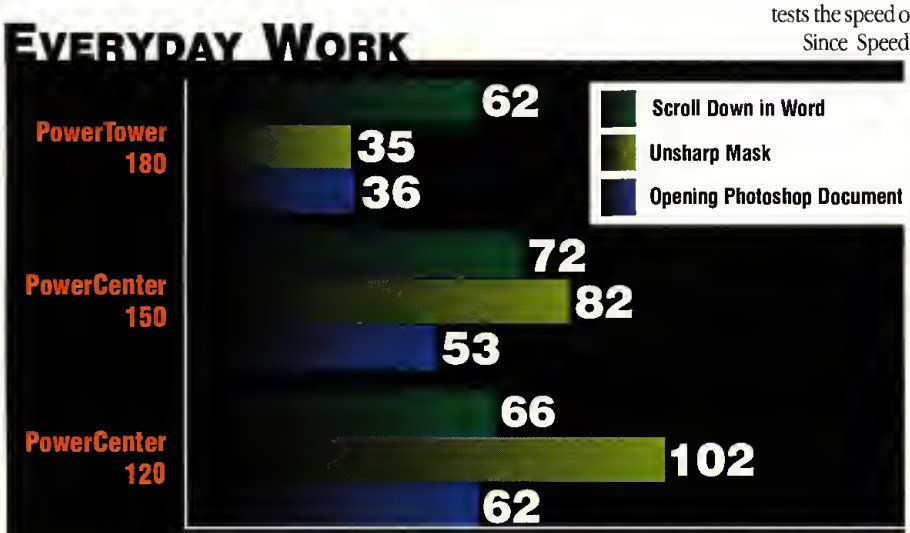
IN ORDER: HOT, NOT-SO-HOT AND HOTTEST.

Everybody loves a bargain. And that's just what Power Computing strives to deliver with its new PowerPC 604-based PowerCenter and PowerTower lines. The PowerCenter line replaces the PowerCurve line and includes three desktop computers, running at 120MHz, 132MHz and 150MHz. The PowerTower line includes two minitower units, running at a whopping 166MHz and 180MHz. To see whether these machines really do deliver speed and value, we put three of them—the PowerCenter 120, the PowerCenter 150 and the PowerTower 180—through the MacAddict mill. The verdict? Power Computing got it right—mostly.

All of the PowerCenter and PowerTower computers include enough hardware to satisfy most users: three PCI slots, four 168-pin DIMM slots (for a maximum of 256MB of RAM), a 512K Level 2 Cache, 1MB (2MB for the PowerTower) of on-board VRAM that's expandable to 4MB, a 4x CD-ROM drive, Mac and SVGA video connectors (although you can't use both at the same time) and built-in Ethernet. Although they don't sport a microphone or a modem, they do come with a keyboard and mouse. They also come with a handy software bundle that includes ClarisWorks, Nisus Writer, Quicken and several CD-ROM titles. Even better, Power Computing lets you customize any model. Find out what features are available and get a price quote on Power Computing's Web site.

After reassuring ourselves that these new machines had all the basics we've come to expect from a powerful Mac, we started digging into the meat of the matter: just how fast are those processors? To find out, we tested each computer with Speed Tester 2.0, a shareware program that tests the speed of basic toolbox functions and floating point calculations.

Since Speed Tester only measures processor speed—and there's more to speed on the desktop—we also timed three common operations: opening a 3.8MB JPEG file in Photoshop (which expands to 28.5MB when opened); performing an unsharp mask on the image (using a 100 percent setting over a 1 pixel area and at 0 levels); and scrolling from the top to the bottom of a freshly opened 22-page Word 6.0.1 document. Here's what we found.

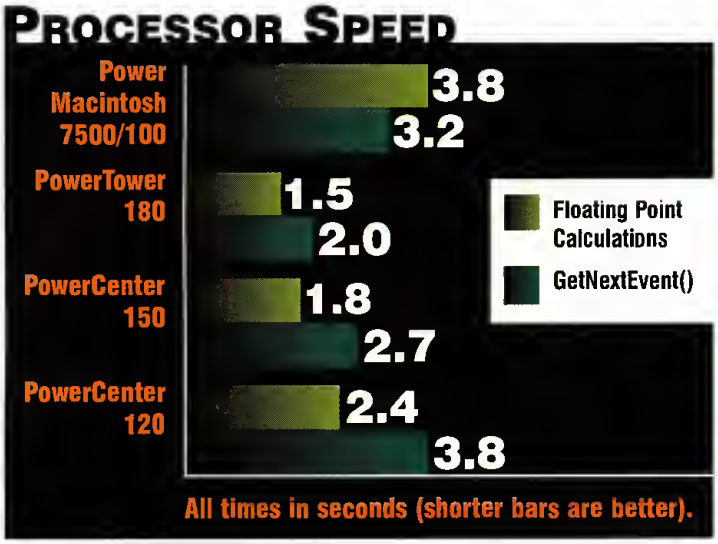


WE RAN THESE MACHINES THROUGH THREE REAL-WORLD TESTS. We timed opening a Photoshop file, performing an unsharp mask on that image and scrolling through a Word document. While the PowerCenter 120 and PowerTower 180 performed as expected, the PowerCenter 150 came up short in the scrolling test.

PowerCenter 120

This is the "low end" PowerCenter, but with a PowerPC 604 processor running at 120MHz, it's hard to call it low end. Out-of-the-box setup for the PowerCenter 120 was smooth—just like a Macintosh. The System software came pre-installed as did some of the applications. The manuals were well-designed and helpful. Power Computing also includes "System 7.5 for Dummies" for those post-installation questions.

The PowerCenter 120 handled the Photoshop and Word tests without a hiccup. In fact, the only oddity we found was in the processor speed tests. According to specifications, the PowerCenter 120



USING SPEED TESTER 2.0, we compared the speed of the Power Computing compatibles' processors to a Power Macintosh 7500/100. We were surprised at how close the Power Macintosh 7500 and the PowerCenter 120 were in performance, considering that the Power Mac 7500 has an older and slower chip.

POWERCENTER 120: TRIPLE-DIGIT SPEED AT A GREAT PRICE.

should be faster than the Power Mac 7500/100, which has a 100MHz PowerPC 601. However, the Speed Tester tests showed that the PowerCenter 120 performed on par with the PowerMac 7500.

Nonetheless, the PowerCenter 120 is an excellent value. It costs about $350 less than a similarly configured Power Mac 7500/100, its PCI slots and RAM slots give you plenty of room for expansion and the case has room for an internal 3.5-inch full-height device or two-half-height devices as well as one 5 1/4-inch full-height device that's accessible from the front panel. Our only complaint is that the speaker sounds tinny.

PowerCenter 150

The PowerCenter 150 is the highest-end machine in the PowerCenter line. It comes in the same case as the PowerCenter 120, but the base PowerCenter model 150 includes more RAM and a larger hard drive. (You can, however, order the PowerCenter 120 with any amount of RAM and any size hard drive you want.)

On paper, the PowerCenter 150's processor runs 25 percent faster than the one in the PowerCenter 120, so you'd think it would perform that much faster in real life. Our Speed Tester results showed that the PowerCenter 150's processor runs about 20 percent faster than the one in the PowerCenter 120. That 20 percent performance edge held when opening the Photoshop document and performing the unsharp mask. So far, so good. Scrolling through the Word document, however, took longer on the PowerCenter 150 than it did on the PowerCenter 120.

KICK-ASS SPEED IN A BEIGE BOX.

Setup for the PowerCenter 150 was seamless. Operation, however, was not. We experienced freezes and incompatibilities when using the PowerCenter 150.

Our overall opinion? The PowerCenter 150's marginal speed increase isn't enough to justify the $1,000 premium over the cost of the PowerCenter 120. (Power Computing also offers a 132MHz PowerCenter which we did not test.)

PowerTower 180

This is screaming-fast, kick-ass raw PowerPC power at its best. The 180MHz PowerTower is the fastest single Mac-compatible processor sold as of this writing. And it shows. The PowerTower tore through our processor tests, doing math faster than your 9th-grade algebra teacher after his third cup of coffee. This extra speed also showed up in the real-life tests. The PowerTower 180 was nearly twice as fast as the PowerCenter 120 in opening the Photoshop document, and it was more than three times as fast performing an unsharp mask.

The PowerTower 180 also has more room for internal storage than the PowerCenters. You can add a second 3.5-inch full-height, or two half-height, devices as well as two 5-1/4-inch full-height devices that are accessible from the front panel.

If you are one of the lucky few who can afford a Power Mac 9500, then you should seriously consider the PowerTower 180 (or its sibling, the PowerTower 166). The PowerTower 180 isn't quite as expandable as the Power Mac 9500: it has fewer PCI slots, fewer RAM slots and less space for internal storage. But, in buying the PowerTower 180, you'll save money and be the object of speed envy among your friends.

For value, the PowerCenter 120 brings home a motherlode, and for sheer speed for your dollar, the PowerCenter 180 is a great deal; we recommend both. But the PowerCenter 150 didn't perform well enough to distinguish itself from the PowerCenter 120, and it costs much more than its small performance boost warrants. *—David Reynolds*

PowerCenter 120

GOOD NEWS: Excellent price tor an all-around great performer.
BAD NEWS: The internal speaker sounds cheap.

PowerCenter 150

GDDD NEWS: It beats a PowerMac 9500/132 in speed and in price.
BAD NEWS: Didn't perform much better than a PowerCenter 120. Prone to incompatibilities. The internal speaker sounds cheap.

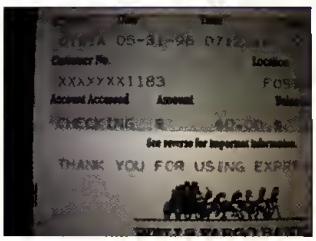
PowerTower 180

GDDD NEWS: Enough speed tor Keanu Reeves
BAD NEWS: Three PCI slots and a 256MB RAM cap could prove limiting to major power users.

Color QuickCam

DEVELOPER: Connectix
CONTACT: 800-950-5880; http://www.connectix.com
PRICE: $269 (street)
REQUIREMENTS: 6804-based Mac, 8MB of RAM, System 7.0 or higher

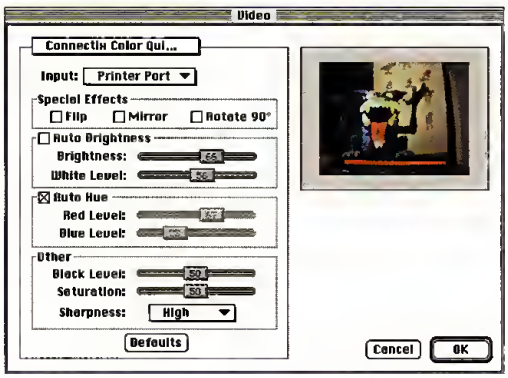
LEFT: The Color QuickCam retains its friendly round shape, and now includes a focusing ring on the front. Connect it to your Mac via a serial cable; a pass-through ADB port provides power.



RIGHT: The Color QuickCam allows you to focus closely on objects such as this ATM receipt. Notice that you are able to easily read the text. The graphic ot the stagecoach at the bottom of the receipt also shows up clearly .

It's been a long, but worthwhile, wait for the color version of the Connectix QuickCam. The eyeball-shaped Color QuickCam lets you capture 24-bit still photos and videos. At 640 x 480 pixels maximum, the Color QuickCam's resolution isn't all that great and even at the highest frame rates, video is still jerky. But like the original grayscale QuickCam, the Color QuickCam wins you over in an instant with its ease-of-use and "cool gadgetry" appeal.

Connectix has done an impressive job of integrating color into the QuickCam. Color is amazingly accurate and vibrant. Frame rates are equivalent to those provided by the original QuickCam, even though color data takes up much more bandwidth than does monochrome data. For example, on my Power Mac 7500, I was able to achieve between 20 and 24 frames-per-second when capturing 160 x 120 pixel images in thousands of colors. Growing the image size to 320 x 240, however, slowed the frame rate considerably to 10 frames-per-second or less.



LEFT: The Color QuickCam's software will automatically set brightness, hue, saturation and sharpness or it will let you tweak the settings manually. Here, the brightness has been adjusted to compensate for glare.

It's even more fun making movies with the QuickCam now that you can see your creations in 24-bit color.

The Color QuickCam can achieve these high frame rates because of Connectix's proprietary VIDEC compression algorithm. The lossy algorithm is implemented on a minuscule board inside the QuickCam. Video data is compressed within the camera and then sent to your Mac via a serial port. Without the compression, video frame rates would slow to a crawl.

The Color QuickCam now includes a focusing ring on the front of the camera. Simply twirl the ring to manually focus on objects one inch in front of the lens or across the room. (The lens is a f/1.6, 5.7 mm wide angle with a viewing angle of 48 degrees—a nice, general-purpose lens.)

Taking still photos with the QuickPICT software is as easy as ever (click on the Take Picture button and the software saves the image as a PICT, JPEG or TIFF file). With the ability to manually focus the camera, you can even take clear pictures of small, detailed images such as labels. The software includes a nifty new feature that allows you to leave the shutter open for as long as you'd like or for a set amount of time. There's also a self-timer that sets for up to 60 seconds—a countdown display and sound effects let you know how long you have to place yourself in the picture.

The best new feature is AutoCapture. With it, you can set the Color QuickCam to take pictures at certain times of day, on certain days of the week and at regular intervals (like once an hour). Webmasters will find AutoCapture handy for updating live images to the Web, while the rest of us can use it to, say, take pictures of the new baby while we're at work.

The QuickMovie software is basically the same as it has been. You click on the record button to capture video in QuickTime format. You can also capture video one frame at a time or in time-lapse intervals (setting the number of seconds between each frame). You can now also flip and rotate movies. (The video capabilities can be upgraded for video conferencing if you purchase Connectix' $59 VideoPhone software.)

When taking still pictures or capturing video the Color QuickCam will automatically set brightness, hue, saturation and sharpness. You can, however, manually adjust these settings using slider bars. Generally, the automatic settings worked well (they are optimized for indoor lighting). But in a couple of instances, say, when there was glare on an image from a window, manually adjusting the settings was handy. You will need to experiment, however, to understand the many adjustments.

Hard drive space requirements are reasonable. Ten seconds of video consistently took up 1MB to 2MB of hard drive space at 340 x 240 pixels at thousands of colors. A 24-bit photo took between 200K and 750K, depending on resolution and bit-depth.

The original QuickCam was a fantastic toy and the Color QuickCam is even better. Unfortunately, the price tag has grown to accommodate the more expensive hardware, making the Color QuickCam less of an impulse buy for those people on a budget. Still, for gadget lovers, the Color QuickCam is irresistible. —*Cheryl England*

GOOD NEWS: Color is accurate and reasonably vibrant. Frame rates are acceptable. Brain-dead simple to use.
BAD NEWS: Price is twice as high as original QuickCam.

Bad Mojo

DEVELOPER: Pulse Entertainment
CONTACT: 800-264-0325; http://www.badmojo.com
PRICE: $50 (street)
REQUIREMENTS: 2X CD-ROM, System 7.1 or later, 33MHz 68040 or better, 8MB of RAM

If you have to close your eyes and count to ten after turning on the kitchen light for a late-night snack, you might want to skip Bad Mojo. Former residents of New York City reacted to this game with a shudder and a "don't tell me any more." Personally, Bad Mojo brought back fond memories of fourth grade—stuffing the school lunch leftovers into a milk carton and calling it goulash. Sometimes you just don't outgrow the fascination with the grotesque.

In this graphical adventure, you're an entomologist who's been turned into a cockroach on the eve of skipping town with grant money. Unlike Gregor Samsa, you are a regular-sized roach, and more importantly, you have a chance at redemption. You have to figure out how to get transformed back into the man you were.

The only tool you have to aid you in your quest is your tiny cockroach body—no opposable thumbs, no pockets, no gadgets. You drive your cockroach using the arrow keys: up for forward, down for backward, and left and right to rotate. You can move objects as long as you are heavier than they are, or you have a long enough lever.

The game is composed of digital video, photographs and around 800 computer-rendered stills with wonderfully appropriate background music. The digital video was shot on sets that were built to look just like the computer model, so the transition between real life and the model life is seamless. The imagery looks even better on a computer that supports thousands of colors. Your cockroach travels over the rendered stills and dissolves when moving from one still to another. However, you're not moving over a flat surface—objects in the stills have depth, and your cockroach body twists along the Z axis to reflect this.

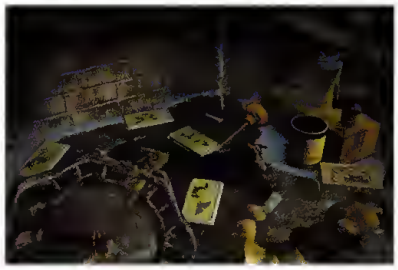
After playing the game for only a few minutes, you really do start to feel like a cockroach. Movement is natural, and the roach-eye view of humanity is both amusing and disgusting. There are parts of the game that are too gross for young children, but teens will love them. Exploring the world of Bad Mojo is all-encompassing; there is nothing out of place to jar your suspension of disbelief.

The roach world is divided into six rooms connected by a sewer system. The first room has puzzles that acclimatize you to roachness and the game's bizarre logic. Gameplay involves figuring out where the room exit is and how to overcome the obstacles blocking your path. As you scurry around the rooms, you discover items that explain the history of the building and your transformation to a cockroach. You'll need to understand this story to make decisions toward the end of the game.

You can die in Bad Mojo. A particularly nasty cat has it in for you and there are some icky rats, too, among other traps. You are given four chances on a particular screen, and after that you are transported back to the entrance of that room—so save early and save often.

All in all, Bad Mojo is a great game. It's true that if you played the game straight through knowing exactly where to go, it would take less than a day to finish. However, the world is rich enough that it will take you much longer to explore the game fully. Unlike other adventures that lead you on a straight path through the plot line, Bad Mojo lets you crawl all over the floors, walls and even underneath beds to discover the right path. —*Kathy Tafel*

ABOVE: You'll need to figure out roach-like ways of getting where you need to go. You can't crawl over the grease because it's too slippery; watch out for the hot burner, the blood and the bubbling chili.



LEFT: Your roach buddies lead you to this pinnacle which gives you a view of the maze below. Take this opportunity to figure out your surroundings, but watch out for dead rats, Roach Hotels and the vacuum cleaner.

LEFT: This is just a small insight into how wacked out your character was as a human. The eyes used in Bad Mojo belong to OJ Simpson, Tom Cruise, Michelle Pfeitter, David Letterman and other celebrities.

BELOW: If you can hold down your lunch, you'll appreciate the more than 800 detailed renderings. Some images may be too shocking for young kids.

Find a trial of Bad Mojo on The Disc.

GOOD NEWS: High quality game sucks you into an alternate reality.
BAD NEWS: May be too weird for some people.

KPT Bryce 2

DEVELOPER: MetaTools
CONTACT: 805-566-6200, http://www.metatools.com
PRICE: $169 (street)
REQUIREMENTS: 68040 or greater, System 7.1 or later, 8MB of RAM, (16MB recommended), 256 colors, 10MB of hard drive space, CD-ROM drive

When KPT Bryce came out last year, nothing quite like it existed in the 3D graphics world. Bryce was a terrain generator, a program for creating pictures of fantastic landscapes, and although terrain generators such as Vista Pro by Virtual Reality Laboratories and Scenery Animator by Natural Graphics had been around for a while, none could match Bryce's plush fog and sky effects, its hyperreal render quality and its slick KPT interface. But Bryce had its problems: mainly, it didn't offer the user enough control. It was hard to get at the "real" Bryce underneath the shaded buttons.

Bryce 2 changes all that. Bryce 1 offered relatively simple terrains—one infinite plane for sky, one infinite plane for ground, with islands and mountains generated from elevation maps (simple grayscale PICT files created in any paint program) and random fractals. Bryce 2 offers an unlimited number of fully editable ground and sky planes for multilayered fog, sea floors and other complex terrains. In Bryce 1, ground and water were limited to a series of predefined, albeit incredibly realistic, types. Bryce 2 sports many more geometric primitives, as well as a random organic rock generator and symmetrical terrains.

In Bryce 2, you are no longer limited to importing grayscale terrain maps from other programs. A new terrain editor lets you draw directly onto the elevation map with an assortment of brushes and offers a real-time shaded and anti-aliased preview—a big time saver, since you no longer must go back to the main interface to view a model in detail.

The addition of DXF importing (DXF is a standard 3D-model file format) enhances Bryce's new modeling capabilities. Now you can import models from other 3D graphics programs, such as Specular's Infini-D, and place them in your Bryce scene. However, you may not find much need for DXF import because Bryce 2 offers its own solution to complex model creation. Boolean rendering lets you subtract and intersect two objects, using one to carve a shape out of another or create a shape where the two meet. For example, one terrain subtracted from another can create a cave or a trench. Incredibly complex objects can be made just by subtracting primitives from each other.

With all the customizing tools added to this version, it would have been easy for Bryce's interface to become cluttered and confusing. (Bryce 1 fell into the opposite trap—the MetaTools team sacrificed functionality to keep the interface elegant and simple.) But this time around, MetaTools came up with some very clever and economical ways to keep the interface simple without dumbing it down. "Plop boxes," tear-off menus that "plop" down when you click on the small triangular icon that appears near the selected object, provide quick information about an object's status and numerical values without forcing you to go to a dialog box.

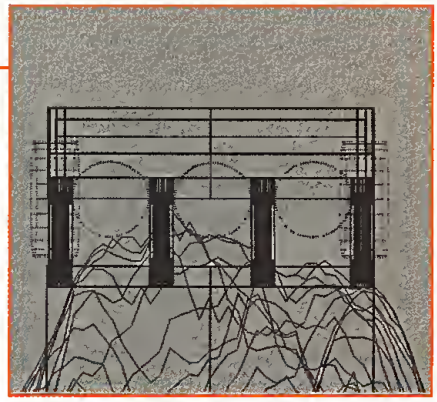
This Magritte-esque scene showcases several of Bryce 2's new features, including symmetrical terrains, rock formations and Boolean operators. See below for information on how to create this image.

HOW TO CREATE AN IMAGE IN BRYCE 2

Step 1: To create a new image, start with a simple object. Open the Create palette and click on one ot the shapes or terrains that's similar to what you want. A terrain can be mirrored at its base, like in this symmetrical terrain view adding more depth to the image.

Step 2: Use the Terrain editor to sculpt the rough shape of your image. Paint in the window in the upper left and instantly see results in the lower left. Add dark areas to make low altitudes in the terrain and light areas to make higher altitudes. Brush sizes, opacity and values are adjustable.

Step 3: Double-click on objects to give them texture and to bring up the Material Composer. Clicking on the word Presets provides ready-made textures that you can be modified and mapped onto your terrain. The Render cost is an estimate of the amount of time a texture takes to render.



Step 4: Use Bryce's Boolean operators to make complex objects out of simple cubes and cylinders. Choose basic shapes from the Create menu at the top of the main screen. This wireframe view has not yet been rendered.

Hidden tools lining the right side and bottom of the screen appear only when your mouse touches them, disappearing when not needed. The NanoPreview is a wonderful new addition that gives you a quick thumbnail view of your scene without the need for a full render. The toolbars and palates are actually rendered in 3D (with Bryce 1, no less), and provide a welcome diversion if you've had too much of 12-point Chicago. This leads to Bryce's only real problem—it's so addictive, it will keep you up at night.

Bryce 2's rendering is among the best in the business. The renderer is primarily a super-realistic raytracer, but Bryce now offers a lesser-quality Phong rendering algorithm as well, allowing you to make quick test renders. Bryce's texture mapping is equally good; you can now apply multiple channels of textures with different shading modes, such as fuzzy or additive, for complex surface effects.

The documentation, however, is inadequate. Each feature earns, at best, a few sentences of explanation. Whole dialog boxes are missing from the manual. The boolean rendering feature is mentioned only once—and then only in the list of new features. Nowhere is there an explanation of how to use this essential tool, and chances are you won't be able to figure it out without a call to MetaTools' tech support or a visit to its Web site. MetaTools is operating on the assumption that users would rather spend time exploring the rich interface of the program and picking apart the many sample scenes on the CD than reading a dry manual, and they're right, for the most part. But this user was on a deadline, and would have greatly appreciated more information. MetaTools is planning a more in-depth manual, but until then you'll have to rely upon your wits and your modem.

The bottom line? Bryce 2 is wonderful. Buy it. Play with it. Just make sure to schedule some nap time. *—Raf Anzovin*

GDDD NEWS: Many new features including: unlimited ground planes, built-in terrain editor and improved customizing tools.
BAD NEWS: Inadequate documentation.

F/A-18 HORNET 2.0

"...this is the finest flight-sim on the market!"
—Mac Action

"The look and feel are top-notch..."
—Strategy Plus

"If you want a modern flight sim, look no further."
—MacHome Journal

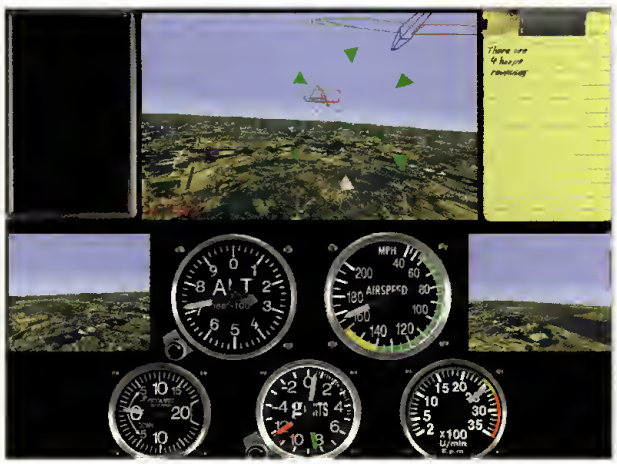
F/A-18 HORNET 2.0
www.graphsim.com/graphsim

GRAPHIC SIMULATIONS

Flight Unlimited

DEVELOPER: Looking Glass Technologies
CONTACT: 800-360-7455; http://www.lglass.com
PRICE: $49 (street)
REQUIREMENTS: Power Macintosh, System 7.5, 16MB of RAM, 2x CD-ROM, 25MB of hard drive space.

Until now, most flight simulations have concentrated on portraying particular eras of military flight. The reason is simple, helicopter and airplane sims that put you in the center of the action are a lot more appealing than just flying a plane. But while these games are realistic portrayals, they almost always lack the fundamental flight training players need to get the most out of the game. As a result, most players and first-time users are left thumbing through pages of manuals for tips and hints on getting the plane off the ground. Now the confused would-be pilot can rejoice: for those players who want to learn about the basics of flight and for those who want to rediscover the basic joys of flying, there's Flight Unlimited.



ABOVE: The realism in this flight simulator is incredible. Flight Unlimited lets you adjust your perspective—from the cockpit or from the outside of the plane—in the middle of the game.

LEFT: Flying through hoops helps you visualize maneuvers and improve your aerobatic skills. The window in the upper left tracks your flightpath. Watch for your flight instructor's comments on the notepad.

Much like an amateur pilot would learn to fly a plane, Flight Unlimited starts out with a fixed base of operations and an instructor. Players can choose from a variety of interactive lessons, 34 in all, go through ground school, or immediately take to the sky. Once into the game, players can travel to other air fields, learn advanced flying techniques and even record their aerial feats for further examination. Flight Unlimited not only unlocks the basic mysteries of flying—like what keeps a plane in the air—it gives players a chance to discover the wonder of flight.

Every game begins in the pilots' lounge. Choose which plane to fly by clicking on its model. The whiteboard is where you choose from the 34 flight lessons.

Eye-grabbing graphics make Flight Unlimited impressive. The game uses texture-mapped 3D models that make it seem as though you are flying over a photograph of the ground. Flight models also act amazingly accurately: the Pitts S-2B stalls in a sharp turn just like the real Pitts would, and the Grob Sailplane dips and sways in the wind just like its real-life counterpart.)) Added details like sun flare, negative "G" effects and varied cockpit views make this one gorgeous game.

Flight Unlimited will put your PowerPC processor to the test. However, it is adjustable for slower PowerPC-equipped Macs. This small-screen, low-resolution mode has a perfectly fluid flight simulation. A polygon-only mode is available, too.

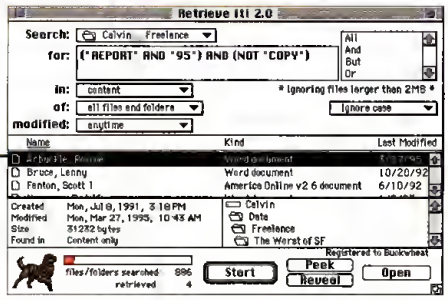
This realism, however, comes at a price. Flight Unlimited only works on Power Macs, and the faster the chip the better. You should also have at least 16MB of RAM. Optimizing the game for your system is easy; Flight Unlimited lets you cut features in order to increase the game's performance. A bar graph rates expected performance as you make adjustments.

If you crave shooting stuff, or want more action than executing a tight competition turn or a half Cuban eight, Flight Unlimited is not for you. But then again, you may be the pilot the programmers had in mind. Flight Unlimited does an excellent job of portraying realistic flight, and it does an excellent job of teaching you how to fly. More importantly, it helps you become a better pilot. The maneuvers taught here are actual competitive aerobatics, and can be easily adapted to your next game of FA/18 Hornet, Flying Nightmares or any military-based flight sim for that matter. Plus, five of the world's most amazing aerobatic dare-devil planes are represented here, including the 1995 U.S. National Aerobatic Champion's Extra 300. These planes are no jets, but they are quite aggressive and they have some incredible abilities. —*Vince Matthews*

GOOD NEWS: Incredibly realistic flight model and a non-violent flight sim.
BAD NEWS: Requires a very fast Macintosh and a lot of RAM.

Retrieve It! 2.0

DEVELOPER: MVP Solutions
CONTACT: 415-562-3457
PRICE: $39 (street)
REQUIREMENTS: Any Mac with 4 MB of RAM, running System 7.0 or greater



RETRIEVE IT! searches inside files to find specific phrases.

Like Apple's Find File, Retrieve It! can locate files by name. But its real strength is the ability to search files based on information contained in them, finding, say, all files containing the phrase "Hi Grandma." Retrieve It! allows for search strings of up to 250 characters in length, and the criteria can be as complex as you'd like. (In System 7.5 or later, Find File can search contents if you Option-click its pop-up menus; however, the search string must be fewer than 32 characters and extremely precise.)

If you can remember a unique word or phrase contained in the document you want, Retrieve It! can usually find it quickly. And Retrieve It!'s Boolean operators (and, but, or, not, after, before, etc.) can be used to create complex search criteria that specify unique combinations of words (for example, "mutual" and "fund" but not "retirement"). Furthermore, you can easily tell it to exclude everything except files created by a particular application, or to ignore the case of the search string. Find File can't touch these features.

As Retrieve It! locates files that match your search criteria, it displays them in a list; you can get information about these files while the program continues to locate other matches. (Find File doesn't display anything until the search is complete.) When you click on a file in the list, you see its creation and modification dates, size and location on disk. You can then open, reveal or peek at the file. Opening the file is the same as double-clicking it in the Finder. Revealing a file opens the window that contains the file to perform standard Finder operations.

Finally, you can "peek" into a file to see its contents. The peek window sometimes looks like gobbledygook since Retrieve It! can't interpret all of the different formatting codes used by other programs. But if you're looking for words and phrases, the peek function gives you a good idea of the document's content.

If you frequently search in desperation for a file you just know is hidden somewhere on your hard drive, then you should let Retrieve It! do the work. It's very well designed, superbly documented, full-featured and fast. I only have one complaint: $39 seems a bit steep, since the program doesn't eliminate the need for Find File. *—Owen W. Linzmayer*

GOOD NEWS: Fast searches of unopened documents. Immediately displays search results.
BAD NEWS: Doesn't entirely eliminate need for Find File.

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Two Flatbed Color Scanners

ActionScanner II
DEVELOPER: Epson America
CONTACT: 310-782-0770; http://www.epson.com
PRICE: $499 (street)

ScanMaker E6
DEVELOPER: Microtek Lab
CONTACT: 310-297-5000; http://www.mteklab.com
PRICE: $599 (street)

No longer are flatbed scanners a luxury item. Prices have dipped below $600 and today's units yield higher-resolution and more accurate scans than earlier models. In fact, these scanners' image quality is suitable for all but the most demanding publishing jobs.

Representative of these new scanners are Epson's ActionScanner II and Microtek's ScanMaker E6. The ActionScanner II is a compact, lightweight unit that fits comfortably on a crowded table. The ScanMaker E6 is bulkier and has a larger footprint, not surprising, as it sports a larger scanning area than the ActionScanner. One nice feature: the ScanMaker E6's lid can be lifted so you can scan thick items, such as books, without straining the hinge, the most vulnerable part of any flatbed scanner.

ACTIONSCANNER II

SCANMAKER E6

IN THESE 300 DPI SCANS from an ordinary snapshot, using default settings, the Epson ActionScanner II rendered the flesh tones more accurately. The Microtek ScanMaker E6's contrasty scan imparts a yellow cast to the entire portrait. The ScanMaker E6 delivers a crisper image with bright highlights and more detail in the hair and jewelry than does the ActionScanner II.

Both scanners have 25-pin and 50-pin SCSI ports and include a 25-to-50-pin SCSI cable. The ActionScanner II has a switch for turning termination on and off, which makes adding the scanner to your SCSI chain easier. The ScanMaker E6 is a little trickier to set up. Everything's fine if the scanner is the only or the first device in the SCSI chain, but if it isn't, you'll need an external 50-pin terminator (not supplied).

Both machines are single-pass scanners; a three-color lamp lets them scan a color image in just one pass. Despite this similarity, the scans produced by each unit are noticeably different. The ActionScanner II generates 24-bit scans at up to 300 x 600 dots per inch (dpi), with software interpolation, it will produce images up to 2400 x 2400 dpi. At a typical resolution of 300 dpi, the ActionScanner II generates scans with respectable flesh tones—notoriously the hardest colors to reproduce—with adequate sharpness.

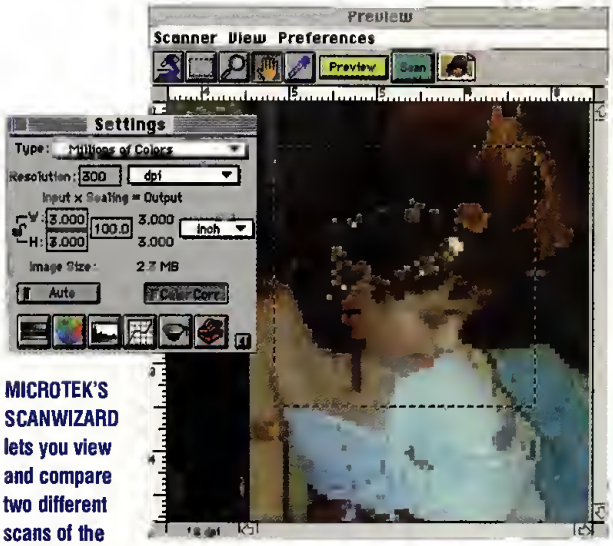
The ScanMaker E6 boasts a higher optical resolution and more than a billion colors, up to 30 bits per pixel. But even at 300 dpi, this scanner yields noticeably sharper scans, with more vivid colors and more detail in the shadows and other dark areas than does the ActionScanner II. But the ScanMaker E6's color accuracy at default settings isn't as precise as that of the ActionScanner II: flesh tones are yellow, giving faces a jaundiced look.

The ActionScanner II was faster than the ScanMaker E6, especially when scanning small, low-resolution images. For example, when scanning a 3 x 3 image at 300 dpi, the ActionScanner II took about 30 seconds while the ScanMaker E6 took slightly over 50 seconds. The gap narrowed, however, when scanning larger or higher-resolution images.

The quality of a scanner's controller software makes a big difference in the unit's overall usability. The ActionScanner II's scanning software, Epson Scan! II, installs as a separate application and can be used to acquire and correct scans. It performs the basic functions of scan previewing, output-device color calibration, scanning and post-scan correction more than adequately. There are enough controls and tweaks to satisfy most perfectionists, but the software also works well at the default settings.

Epson Scan! II does some unfriendly things. For example, it forces you to exit the acquire mode to export a file. If you want to scan another image, you must re-enter acquire mode—with an 18-second reload time. Epson Scan! II is also a memory hog. The software would not scan a snapshot-sized image at 150 percent and 300 dpi until its application memory size was set to 24MB. For many users, that rules out running other programs at the same time.

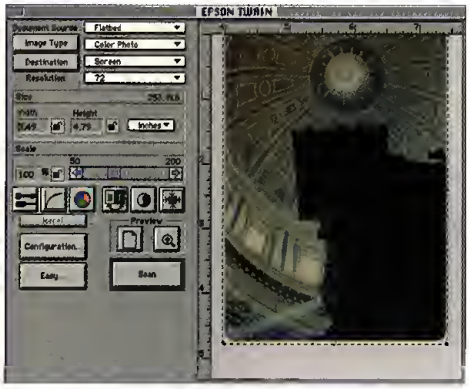
	Epson ActionScanner II	Microtek ScanMaker E6
Optical resolution	300 x 600 dpi	600 x 1200 dpi
Interpolated resolution	2400 x 2400 dpi	4800 x 4800 dpi
Color depth	24-bit	30-bit
Scanning area	8.5 x 11.7 inches	8.5 x 13 inches
Imaging software	Adobe PhotoDeluxe	MicroFrontier Color It!
OCR software	WordLinx	OmniPage Direct
Photoshop plug-in	no	yes
Tech support	toll-free, unlimited	toll-free, unlimited
Warranty	2 years	1 year



MICROTEK'S SCANWIZARD lets you view and compare two different scans of the same subject. Image enhancement controls (the icons at the bottom of the Settings dialog) let you, among other things, adjust brightness, contrast, tints, apply filters and increase an image's details.

Microtek's ScanWizard, a Photoshop-compatible plug-in that can be used with an image editor such as Adobe PhotoDeluxe (which also ships with the ScanMaker E6), offers more sophisticated features. One that is immediately useful is the well-designed Tint adjustment; you'll use it to compensate for the ScanMaker E6's yellow scans. You can also compare two scans—one before an adjustment, and one after—in thumbnail views.

Each scanner also comes with an image editor and OCR software, and in this area, too, the ScanMaker E6 comes out slightly ahead. The ActionScanner II comes with Adobe PhotoDeluxe, a beginner's tool for correcting scans and applying special effects, and Maxsoft-Ocron's WordLinx, a basic OCR package. The ScanMaker E6 ships with



EPSON SCAN! II GROUPS CONTROLS CONVENIENTLY in one window. Click on the Easy button, select the type of image you are scanning and where it goes and the software automatically creates your scan settings. Click on the appropriate button to adjust image brightness, contrast, tint, gamma, etc.

MicroFrontier's Color It! (the best low-cost Photoshop clone) and Caere's popular OmniPage Direct.

Which one would I buy? I prefer the Microtek ScanMaker E6 because its higher resolution and greater color depth produce higher-quality scans than the ActionScanner II and the ScanWizard software gave me greater control over image adjustments. But if you don't want to color correct scans or if you don't need the best quality—say, if you want to print images on a color inkjet—then the Epson ActionScanner II is a better choice. At the default settings it produces more accurate flesh tones, it's compact and easy to install and it's cheaper. *—Steven Anzovin*

ActionScanner II

GOOD NEWS: Easy to set up. Yields accurate colors at default scan settings. Fast.

BAD NEWS: Images lack some sharpness and shadow detail.

ScanMaker E6

GOOD NEWS: Large scan area. Can scan books. Yields sharp, vivid scans with lots of detail. Excellent software.

BAD NEWS: Flesh tones are yellow.

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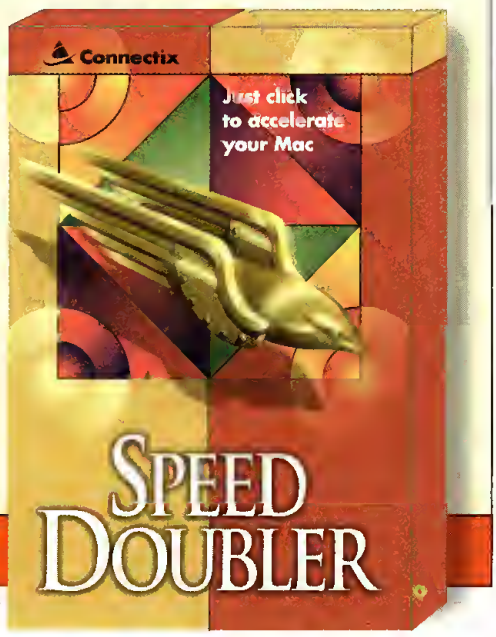

Requirements: Macintosh equipped with a PowerPC, 68040, or 68030 microprocessor • System 7.0 or greater • 8 MB physical RAM or greater • Compatible with Connectix RAM Doubler • Not compatible with Mac Plus, Mac SE, original Mac Classic, original Mac LC or PowerBook 100

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reviews

Full Tilt! Pinball

DEVELOPER: Maxis
CONTACT: 800-526-2947; http:// www.maxis.com
PRICE: $25 (street)
REQUIREMENTS: 2x CD-ROM drive, System 7.0 or higher, 68030 or better, 8MB of RAM, 256 colors

Bing! Ping! Pa-ching! If you want a realistic Mac pinball game, look no farther than Full Tilt! Pinball. Full Tilt! includes three pinball tables each of which can be used by a single player or four players who take turns. In some situations, the game lets you have multiple balls in play at once and you can tilt if you nudge the table too hard.

Mastering Full Tilt!'s controls is simple. Put the ball into play by pulling the plunger back with the space bar, controlling the left and right flippers with the "Z" and "/" keys, respectively. You can even nudge the machine from the left, right or bottom using the three nudge keys, but be careful not to tilt. All of the keyboard commands are user-definable.

Full Tilt! looks, feels and sounds just like real pinball. Its playfield tilts away from you slightly, unlike the artificial direct overhead views of the LittleWing games such as Eight Ball Deluxe and Loony Labyrinth. The balls race around convincingly under the spell of gravity, mass and inertia whether they are ricocheting off bumpers, dropping targets, sliding down ramps or colliding with flippers. Get the smoothest game by running Full Tilt! alone; ball movement is jumpy when other programs are open, no matter how much memory is installed. All this action is accompanied by real pinball sounds, digitized voices and background music; each can be turned off separately.

Space Cadet provides the simplest table, with two flippers and only one elevated platform. Dragon's Keep and Skulduggery have three and four flippers, respectively, multiple elevated platforms and wire ramps that transport the ball over the playfield. It takes a while to figure out how to earn bonus points since the table elements are not described in the manual, and Balloon Help doesn't work. (Real-life pinball games don't come with instructions,either.) Fortunately, free, unlimited technical support is available via a toll call.

Skulduggery is just one of the three tables available in Full Tilt! Pinball.

I've played all of the pinball games available for the Macintosh, and none of them comes close to matching Full Tilt! in ease-of-use, gameplay, realism or fun. *—Owen W. Linzmayer*

GOOD NEWS: Looks, sounds and feels like a real-life pinball game. Inexpensive.
BAD NEWS: Table elements are not described in the manual and Ballon Help does not work.

Vicom Internet Gateway Lite

DEVELOPER: Vicom Technology
CONTACT: 800-818-4266; http://www.vicomtech.com
PRICE: $149 for a two-user modem package
REQUIREMENTS: 68020 or better, 2MB of free RAM, System 7.0 or later, MacTCP or Open Transport, modem and an ISP account

Are you a two-Mac family with two avid surfers in the house? Do you fight over who gets to use the modem? Stop arguing and go get the Vicom Internet Gateway. While not advertised as a marriage counselor, the Gateway will solve your modem-sharing dilemmas.

Here's how it works: you set up one Mac with the modem and install the Internet Gateway software on it—this Mac acts as both a host and a client. The Gateway acts as the user of your ISP account, and you set up a dummy IP (Internet Protocol) network between your two Macs to share the account. Information is routed from the Internet by the Gateway to the correct Mac using the dummy IP address. The Gateway can bar access to individual Internet sites—great if you want to keep your kids out of certain sites.

We experienced only a few bumps setting up the Gateway on a PowerWave 150 using the auto-configurer. Setting up both the PowerWave and a Quadra 605 as clients was more problematic, since the software could not auto-configure our MacTCP and Open Transport TCP/IP control panels. But problems arose when we set up the dummy IP network—you must have two IP addresses, one for each Mac. The Gateway's manual does a great job of explaining what an IP address is, but the concept is still esoteric and confusing.

We connected the Quadra over LocalTalk to the PowerWave, through the Gateway and out the modem to the Internet in about twenty minutes—try that on a Windows box! Setting up the PowerWave was more difficult. We spent over an hour examining every single dialog box in MacTCP, Config PPP, TCP/IP and the Gateway before we realized that the version of Gateway we had did not support using Open Transport as a client on the same machine as the Gateway. After we downloaded a new version of the Gateway that supports Open Transport from Vicom's Web site it only took a few minutes to get the PowerWave up and running, too.

There are some glitches. When both users are surfing, reading news, or sending e-mail, the Gateway works just fine. However, when one person is using a program in the foreground that needs a lot of bandwidth—Escape Velocity, for example—the Gateway grinds to a halt. This can be fixed—but it takes a lot of whining.

You don't have to know the difference between LCP and IPCP—we don't—to set up the Gateway, but you will have to read the manual. Still, the Vicom Internet Gateway is far cheaper than a second 28.8 modem, phone line and ISP account. And with the Vicom Internet Gateway you won't have to hide your modem to get surfing time. *—Kathy Tafel*

GOOD NEWS: It's the first product that lets two Macs share an Internet account.
BAD NEWS: You have to deal with the concept of IP networks.

tips

Setting Up

Remember these settings. Don't worry about the other billion options.
1. You are on a "Class C" network.
2. Use 200.200.200.1 for the Gateway-connected Mac.
3. Use 200.200.200.2 as the IP address for the other Mac.
4. In the "More... " part of MacTCP, 200.200.200.1 is the Gateway address.

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— Next Generation

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reviews

Secrets of the Luxor

PUBLISHER: Mojave
CONTACT: 801-652-5300; http://www.mogames.com
PRICE: $59 (street)
SYSTEM REQUIREMENTS: 68K or PowerPC, 256 colors or higher, System 7 or higher, 5MB of available RAM and a CD-ROM drive

ABOVE: One great feature is the use of QuickTime VR in gameplay. If you need to get a closer look around a room, just strap on this VR helmet. In fact, some clues can only be seen with the helmet.

BELOW: The journal you find in your backpack provides invaluable clues for many riddles. Complete with drawings and observations, it may well be the single most valuable item you start out with.

So, you're tired of 'Myst' comparisons. I'm sorry I have to do this: but the fact is, Secrets of the Luxor by Mojave simply must be compared to the now-legendary game by Rand and Robin Miller. The dynamic duo are even quoted on the Luxor box saying "Secrets of the Luxor is certainly the most 'Myst-like' experience we've had since Myst itself." Are these guys just blowing smoke or is Luxor really comparable to Myst?

The game begins in a dusty hotel room just prior to your departure to a newly excavated tomb deep below the Luxor pyramid. This excursion is particularly exciting, not only because pristine Egyptian tombs are pretty darned rare, but because throughout the complex pyramidal chambers there seem to be mysterious hints of an advanced civilization. Alas, continuing your research will not be as easy as you hoped, thanks to a secretive military group that has taken over the dig. Add to this, an enigmatic benefactor (Dr. Osiris) with a completely self-serving set of bizarre motives, and you've got the general landscape of Luxor. Yep, it will be up to you to save the world.

Secrets of the Luxor is a visually stunning experience, complete with elaborate 3D rendered scenes, that is highly reminiscent of Myst (they were developed with the same tools). But there are a few crucial differences. First, Secret of the Luxor's animation is interwoven smoothly, crisply, and above all, quickly. The resulting effect makes it difficult to see where the animations have been "matted" over the backdrops, and therefore does not detract from the visual experience.

Perhaps the most stunning feature of Secrets of the Luxor, and what distinguishes it from Myst, is the use of QuickTime VR in gameplay. By strapping on a VR visor (which you find early in the game), you are able to explore the various rooms in full QuickTime VR splendor; in fact, there are even some clues you can only see when using the visor. This adds a completely new dimension to this genre of game, and it's certainly a welcome addition.

Secrets of the Luxor's interface is pure point-and-click. Unlike Myst, however, there's no quick-zip to return to places you've already been; this can get tiring. Overall, the interface isn't bad. You always have access to your backpack—which is chock full of interesting goodies—at the bottom of the screen. In your backpack lies a hefty journal to help you solve some of the riddles in the Luxor realm. It also contains your access cards and even a Polaroid camera just in case you want to capture a clue on film.

Secrets of the Luxor deserves a lot of credit for continuing Myst's concept. Secrets of the Luxor has the same sense of ambience as Myst and it is every bit as visually stunning. Even the music reminds you of Myst. There is enough different about Secrets of the Luxor that Myst fans should enjoy it immensely. The game comes on two CDs and has many challenging puzzles for gamers of all levels. Add to this the use of high-resolution play, QuickTime VR, and a compelling premise, and you've got a game that will be a hit. So what if Secrets of the Luxor sometimes looks to be a Myst rip off? It's a great game. *—Bart Farkas*

GOOD NEWS: Beautiful graphical landscape, challenging puzzles, great ambiance and the QuickTime VR feature is awesome.
BAD NEWS: No quick navigation feature.

Counterpoint

I understand why this game appeals to those who loved Myst. But Myst aside, this game does not rate highly in my book. Here's why:

- Favorably comparing this game to Myst means comparing it to a game that is almost three years old.
- As a static world—albeit with some nicely integrated movies—Luxor feels empty. The background art and music were well-made, but there doesn't seem to be anything in the foreground. Myst was deserted, too, but that was part of the story—you were supposed to figure out why.
- Including a notebook with (obvious) clues does not make for an intriguing gaming experience. In fact, the puzzles almost seemed to interfere with the telling of a story.
- You can't click out of the long advertisment for the Luxor hotel when finishing the game. *–Kathy Tafel*

Top 10 Ways You Know You're A Mac Addict

- ☑ **10.** Your 486 works great—as a flower press
- ☑ **9.** You talk in a wild, animated manner about new 'extensions' and 'peripherals'
- ☑ **8.** You try to double click on your bar of soap when you shower
- ☑ **7.** You feel the urge to enter command E to eject your Pop Tarts from the toaster
- ☑ **6.** You wish this was a "Top Five" list so you could get back to your Mac sooner
- ☑ **5.** At bedtime, you read *Inside Macintosh* to your three-year old Mac whiz instead of Dr. Seuss
- ☑ **4.** You turn on your TV and are concerned when you don't see a smiling icon
- ☑ **3.** You paid $150 for an old Homestead High yearbook just to have a picture of Apple's Co-founder, Stephen Wozniak
- ☑ **2.** You're always telling people you can quit using your Mac anytime you want to...

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Spycraft: The Great Game

DEVELOPER: Activision
CONTACT: 310-473-9200; http://www.activision.com
PRICE: $50 (street)
REQUIREMENTS: 2x CD-ROM drive, System 7.5.1 or later, 33MHz 68040, 8MB RAM + 8MB Virtual Memory (16MB real RAM recommended), 640 x 480 screen

At first blush, this is just not the kind of game I would like—lots of full-motion video clips combined with extremely linear gameplay usually adds up to no fun. But not here. Thanks to an extremely compelling plot, excellent production values and great puzzles, Spycraft manages to do what few other "interactive movies" have done—tell a story within the context of a great game.

The plot is straight ahead techno-thriller, in the best Tom Clancy tradition. Late CIA director William Colby and former KGB Major General Oleg Kalugin consulted on the game design, and play themselves as characters in the game. You play an operative of the Central Intelligence Agency, who is recruited straight from training and sent into a deep-cover role. After the assassination of a top Russian presidential candidate, your job is to liaise with Russian government security to sort through a confusing Web of assassins, rogue spies and Russian Mafiosos, to prevent the collapse of the Russian government and the loss of Soviet-era strategic arsenals (i.e. nuclear weapons).

TOP AND LEFT: The Kennedy Assassination Tool uses 3D models to track assassin's bullets. Use it here, with a model of Red Square, to find the Russian presidential candidate's assassin. With the Camera view you'll catch a glimpse of the killer. Now use the Mix and Match tool to make a computer sketch of his face. The computer then searches for the assassin's identity.

Spycraft's actual gameplay consists of watching full-motion video clips, making a few decisions, solving puzzles and moving on to the next video sequence. Even if you usually find linear adventures tiresome, the plot's tightness demands linearity, and for once, it works well. The puzzles themselves are excellent, and correspond to what actual intelligence agents might do; whether it's retracing the path of an assassin's bullet, using a database to create a composite of a suspect's face, analyzing satellite images or conducting an interrogation. Although the puzzles are challenging enough for most hard core gamers, novices will find that, with time, they can make their way through most of them, too. One of the most appealing aspects of the puzzles is their novelty—we just haven't seen puzzles like this before.

To keep the game up-to-date, part of the code is written in HTML (the language of the Web) which gives you access to a special Spycraft Web site from within the game. This site updates the game and allows access to the real Web sites of the CIA, DEA and other federal agencies. Because the main interface of the game is that of a special personal digital assistant, like a Newton, the Web link is a natural addition. Still, the amount of time a real CIA operative would spend on the public CIA Web site is debatable.

Still, not everything is perfect in Spycraft. Most of my problems weren't with the game design, but the system requirements. The game barely ran on my trusty 6100/60, even though I have 24MB RAM and Speed Doubler—the movies were extremely choppy and suffered tons of frame drop out. That sucked, because not only are the movies essential to knowing what's going on, but they're also well done, and nothing is more frustrating than being pulled out of a dark, ominous scene with fantastic music and acting, by QuickTime crapping out on you. On any faster Power Mac, the game ran, but the problems on low-end Power Macs cost Spycraft one point in its rating.

The late William Colby acts as your advisor during the game. Look for clues in his pithy sayings.

Bottom line: This is an exceptionally well-created product. The story is awesome, the puzzles are fun, and if you have a Mac powerful enough to play it, there is absolutely no excuse not to own this impressive title. *—Chris Charla*

Within the PDA interface you'll receive current information on your mission, search for data on the Internet and stay in touch with your superiors back at Langley.

GOOD NEWS: Excellent game with a compelling plot and great puzzles.
BAD NEWS: Requires at least a Power Mac 7100 with 16MB of real RAM.

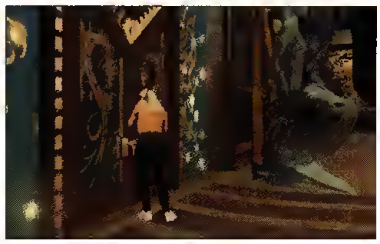
Phantasmagoria

DEVELOPER: Sierra On-Line
CONTACT: 800-757-7707; http://www.sierra.com
PRICE: $69.95 (srp)
REQUIREMENTS: 33MHz 68040, System 7.1 or later, 8MB of RAM (Power Macs require 16MB), 2x CD-ROM, 256 colors, 30MB of hard drive space

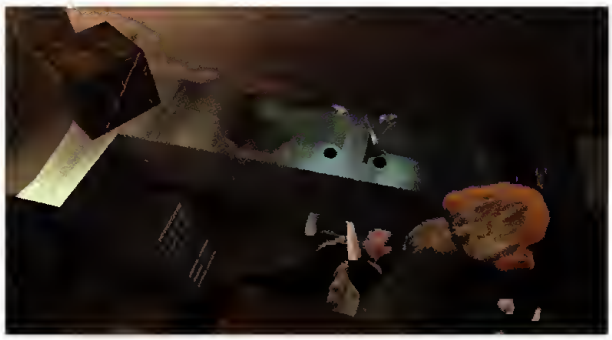
You are sitting in a dark theater, biting your fingernails, watching the movie's heroine as she makes the biggest mistake of her suddenly shortened life. You silently (or not so silently) scream, "Don't go in there!"

Does she listen?

She will with the interactive horror movie, Phantasmagoria. The game has all the elements of a Hollywood thriller, so much so that it's practically a cliché. Huge haunted house with lots of secret rooms? Got it. Really huge, but mentally slow, handy man? Sure. Nice-guy husband possessed by an evil spirit? Yup. Cat that jumps out and scares the beejesus out of the heroine, not to mention you? Whew... you bet it does!



ABOVE: Evil spirits abound in Adrienne and Don's old mansion.
LEFT: Adrienne explores the old New England mansion, unlocking the mystery behind the house.
BELOW: Don, meanwhile, sets up his darkroom and eventually gets possessed by evil spirits.



Phantasmagoria uses full motion video. The characters are real actors but the scenes are computer generated. The game comes on seven CDs, each representing a different chapter. You can save your place in the story with a bookmark, though only one bookmark is allowed per individual game and it can't be moved backward, so place it carefully. Bookmark placement is especially crucial when, near the end of the game, a mistake can kill you.

The game's premise revolves around a successful photographer, Don, and his novelist wife, Adrienne, who purchase an old mansion on the outskirts of a quaint, New England village. While Don is busy setting up his photo darkroom, the beautiful and fearless Adrienne is left to explore the mansion's dank, dusty recesses. And so the tale begins.

Phantasmagoria gameplay consists of directing Adrienne, clicking on an object and observing what she does with it and watching short QuickTime movies that signal the major plot advances. You navigate throughout the house using a vaguely ankh-shaped cursor which turns red when you pass over something that can be examined or used. Click on the object and Adrienne takes a closer look, perhaps stashing it in her pocket. If you need to use the item later, simply click on it from within the ever-present object display.

Direct Adrienne to different rooms by moving the cursor in the general direction you'd like her to go until the cursor turns into an arrow. Click once and she's off. The interface is easy to master, but makes for slow gameplay. I really wanted to be able to direct Adrienne to a certain room without having to "walk" her there.

Phantasmagoria's Hollywood roots are evident in the soundtrack and in the special effects. The audio track is outstanding, including eerie organ music and all sorts of creepy sound effects. Unfortunately, the character dialog has a boomy, hollow quality.

As for the special effects, it wasn't until I got to the "splitting headache" conclusion that I understood the "censored" and "uncensored" options. (By the way, if you view the "headache" scene, you've lost more than your head, you've also lost the game.) There are also some rather sexy scenes that shouldn't be viewed by young children, but they're nothing that "N.Y.P.D. Blue" wouldn't show.

Phantasmagoria cost roughly $4 million to produce, but it's hard to see where the money went. The computer-generated sets and scenery are decidedly first-rate; the acting, however, is not. Actors also stand out rather noticeably and jaggedly from the sets, but then, this is dated technology. Phantasmagoria for Windows has been available for a year or so.

Phantasmagoria didn't horrify me, but it did draw me into the storyline. True gamers will find the puzzles much too easy—it's possible to get through the entire game in less than 10 hours. If you're a horror fan and just can't get enough spooky stuff, then you'll enjoy Phantasmagoria. If you're a gamer who wants more life span for your gaming dollar (and for $70, you should demand better acting), then let Phantasmagoria slip back into the shadows. *—J. Daniel Jones*

GOOD NEWS: Spooky horror story plot pulls you into the game. Great sound effects.
BAD NEWS: Gameplay is slow. Acting is poor. Hard-core gamers will find the puzzles too easy.

Tips

Finding Hidden Clues

- Explore the entire house before you drive off to the village. There are certain items that you must have with you in order to complete the "away" missions.
- If you find yourself in an area you've already covered, push the fast forward arrows (located at mid-screen) to skip over the sequence.
- Keep clicking on characters you're talking to until they start to repeat themselves. Often the information you need will be in the second or third blurb, rather than the first.

Warcraft: Orcs & Humans

DEVELOPER: Blizzard Entertainment
CONTACT: 800-953-7669; http://www.blizzard.com
PRICE: $50 (street)
REQUIREMENTS: System 7.1 or greater, 68030 processor, 8MB of RAM, 256 color monitor, 2x CD-ROM drive, 40MB of hard drive space

Warcraft has long been a best seller on the PC and at last it's available on the Mac. Normally, I don't put a lot of faith in the taste of the PC crowd, but in this instance they are right on the money. Warcraft is simply one of the most addicting computer games I've ever come across.

In this adventure game, set in the mythical land of Azeroth, you must simultaneously build a war machine with which to destroy the enemy while also maintaining a thriving economy. You can play as either a human commander or an Orc chieftain. Depending upon your choice, you'll play in one of two settings—the War in Azeroth or the Destiny of the Orcish Hordes.

ABOVE: These Orcs are getting pummeled by a marauding human army. Your people, Orcs or Humans, are completely subservient to you. Tell them to attack themselves and they will; but what's the point of that?
LEFT: Even though the ultimate goal of Warcraft is to conquer the opposing side, a large part ot this game involves designing a well-run village, not fighting wars.

Gameplay is pretty much identical, regardless of which race you choose. (Actually, you can also choose human fighting against human, or Orc against Orc, using the custom game option. But where's the fun in that?) You can also play the game head-to-head over a network, serial-to-serial link or modem-to-modem. Mac gamers can also play against DOS gamers—now there's a war between the clans. However, only two people can play over a network.

The only real difference between the two opposing camps (Orcs and humans, that is—not Mac and DOS players), is their appearance and how the "units" (humans or Orcs) reply to your commands. The humans favor sayings such as "Yes, my liege?", "Your will, sire?", and the ever-popular, "The children of the underworld are no match for our cold steel!" Orcs, on the other hand, seem to be big Tool Time fans; they favor a wide variety of grunts including "Uuuuggg," "Ooowwwggg" and my favorite, "Uuuraaaggg". Thankfully, they do converse in an intelligible manner when circumstances demand it. Since I get more of a kick out of commanding Orcs than I do humans, I'll refer to their terminology from here on.

There are 12 different scenarios for either race. You start off as a slasher with a fairly simple task. You need to increase the size of your small village from one farm, one peon and three grunts into a slightly larger village of six farms and a barracks. You don't have to increase the number of Orcs to accomplish your mission, but it's nearly impossible if you don't.

The peons do the work of mining the gold and cutting lumber as well as constructing the buildings. The grunts protect the peons. Once the barracks are built you have the option to use your resources to train whatever new Orcs you see fit. As you progress through the levels, you'll have different types of Orcs at your disposal, each with different abilities. The first additions to your army will be the spear carriers. Later, you'll train raiders and necrolytes for mounted attacks and the ability to heal the wounded, respectively.

When gold mines are far from the village, you need more peons to mine them at an acceptable speed. But if you're in an attack-prone area, you also need more grunts to protect the peons. To explore for new gold mines you need to send out a party of grunts. Send out too many and the humans may attack your defenseless camp. This is where the game becomes addicting.

Train more peons or grunts? Build a lumber mill or another barracks? Protect your village or explore for gold? Decisions, decisions, decisions! Once you've set up a few tasks for the peasants and a sufficient perimeter guard you can make the game run in the background. If you've got enough memory in your Mac, you can then do word processing, balance your checkbook or even check your e-mail while your villagers go about their appointed tasks. This isn't an advertised feature, and my computer seemed to crash a bit more than usual while doing it, but hey, I had to get some work done somehow. *—J. Daniel Jones*

GOOD NEWS: Addicting adventure game with multiple scenarios. Not just a "shoot the enemy" game.
BAD NEWS: Setting up a village can be a slow process.

Tips

Battle Preparation

- Don't attack too soon. Build up your forces slowly and methodically until your numbers are overwhelming. Sure it takes time, but all good things do.
- Vary the make up of your scouting parties, for example, two archers, a footman and a cleric. Two or three groups of four, advancing in stages, is the ideal scouting party configuration.
- Archers (or Spearmen, if you're an Orc) are invaluable. Maintain a perimeter of archers at least two-deep at every vulnerable point around your camp.
- Don't forget to keep training plenty of peasants. These are the guys who actually do the work! Your warriors are only protecting them so they can win the game for you. One peasant for every three warriors worked well for me.

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cd-roms

CRITICAL MASS ■ EXPLORING THE LOST MAYA ■ VOLCANOES ■ BLOCKBUSTER VIDEO MOVIES & VIDEO ■ SNL GOES POLITICAL

Browsing the shelves of your local music or book store are you compelled to wrap your arms around all of those shiny jewel box-encased works, full of information on art, history and music? Finding, too frequently, that there's less to the precious disc than its cover?

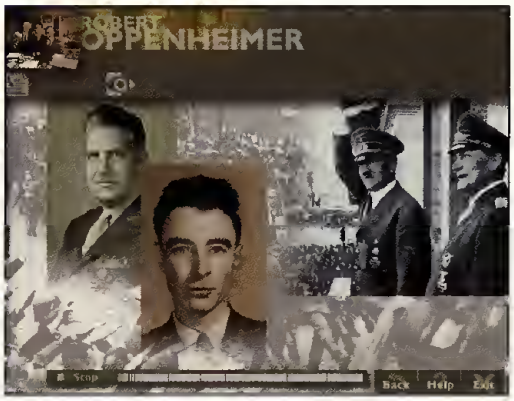
Each month our esteemed panelists Judy Lewenthal, Mark Simmons and Adam Vanderhoof sort the gems from the junk for you.

Critical Mass:
America's Race to Build the Atomic Bomb

PUBLISHER: Corbis Corporation
CONTACT: 800-246-2065
http://www.corbis.com
PRICE: $49.95 (srp)

Critical Mass is a rollicking fun house ride through the birth of the atomic age. It covers the subject with impressive thoroughness, using enough interface and navigation tricks for a dozen CD-ROMs while still maintaining a coherent, approachable style. Content ranges from movies and slide shows, to maps and timelines, to panoramas in which you can look from left to right, take in a scene and click on historical landmarks for more information. An ever-present navigation strip provides a complete index to the features on the CD-ROM: the scientists, nuclear history and Los Alamos.

The interface suggests, without enforcing, a narrative sequence. The first stop is a prelude styled after a classic movie newsreel that provides historical context. You can then poke around a virtual office, where people and items provide links to detailed biographies of atomic scientists. For more in-depth exploration, there are timelines, movie archives and virtual tours of key sites. A slide show brings you up-to-date on the legacy of the atomic bomb and the nuclear era, with suitably melancholic music.



Real people, real science—the real story behind Los Alamos.

Our crack reviews team was—pardon the expression—blown away. Critical Mass provides enough detail and style to win over physics buffs, while remaining compelling to those who might otherwise shy away from the subject.

The Last Words:

Judy: The whole subject of atomic bombs gives me goose bumps. So did the disc. This terrific documentary increased my understanding of Los Alamos and the bomb's history.

Mark: Just incredible. Normally, I get frustrated with opening movies and move to stop them. This time, I was mesmerized.

Adam: Perfect. Amazing. It had a flawless interface and was extremely creative. Images flowed smoothly and dramatically. I kept waiting for it to run out of gas, but it didn't.

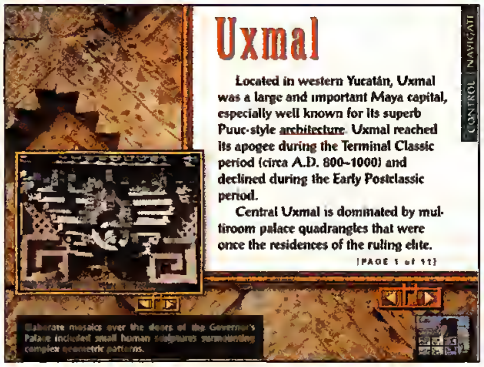
Exploring the Lost Maya

PUBLISHER: Sumeria
CONTACT: 415-904-0800
http://www.sumeria.com
PRICE: $49.95 (street)

Find a demo on The Disc.

Exploring the Lost Maya takes you on a visual field trip of 37 ancient Mayan ruins through four countries: Belize, Guatemala, Honduras and Mexico. Detailed site maps for each location provide hot links to facts and photographs that relay the area's historical importance. For a closer view at the destruction, many sites offer QuickTime VR movies which provide 360 degree panoramic views of the ruins.

Get in close on Mayan culture by way of beautifully rendered drawings and narrations that explain different aspects of daily life, ranging from how they played, to the wars they waged. Three-D animations show their more advanced practices, such as how they built pyramids and how the Mayan calendar works.



A front-seat excursion to detailed history, art and culture.

The stunning photography and elegant design provide a welcoming stage for the hardcore text (provided by Robert Sharer, a professor of anthropology at the University of Pennsylvania) that we found both detailed and informative. But getting to the information was sometimes frustrating. Navigation can be convoluted and the timeline was poorly done. And, though the disc includes travel information, we're not dumping our Fodor's.

The Last Words:

Judy: The history is complete and the places the disc takes you are diverse. The sites offer photos and perspective views. I'd use it as a reference, but not as a traveler's guide.

Mark: I had fun poking around the individual sites. It was a great alternative to dragging my butt onto a plane to Mexico to see the ruins. But the timeline was sketchy.

Adam: I like pre-Columbian art—it blows me away. The images were beautiful and the history was thorough. I liked being able to see a big map and then click to a specific site.

Volcanoes:
Life on the Edge

PUBLISHER: Corbis Corporation
CONTACT: 800-246-2065;
http://www.corbis.com
PRICE: $49.95 (srp)

The moment this CD came in, we all wanted to pop it into our Macs and watch volcanoes. Spewing lava! Molten goo! Imagine our disappointment when we found that the focus of the disc wasn't the hot, bubbly, path-of-destruction volcano stuff, but the story of photojournalist Roger Ressmeyer who, on an assignment from National Geographic, sets out to photograph the world's active volcanoes.

Tip-toe through the craters of the world from the disc's main page. Then launch into Ressmeyer's narratives, scientists' reflections, 18 different slide shows and an extensive index of photos and historical footnotes. But finding your way to the scientific ash and grit takes patience.

There are no video clips, but the discs' information is interesting. Hot lava has a huge rap sheet, but often, it is the earth's other misbehaviors that cause the most destruction. For example, in one eruption, the earth's intense heat and steam melted a mountain's snow fields, sending 100-foot waves into a valley just 60 miles from a city: 23,000 people were killed.

We understand Corbis' rationale behind creating the CD, but the disc is a solid version of a standard, glossy coffee-table book. Give us spewing lava, and we might think about it again.

"Dormant" images take most of the fun out of volcanology.

The Last Words:

Judy: I was much more interested in the photojournalist's story than I was in the volcanoes.

Mark: If I put in a CD called Volcanoes I want to see a mountain explode. Instead, I got a couple of still pictures and some scrolling text.

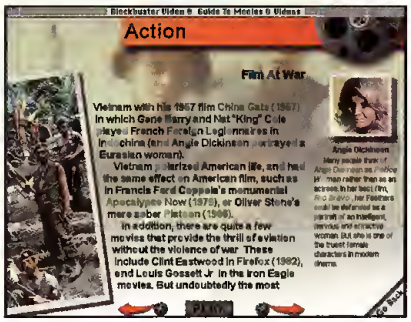
Adam: The best part was the photos, and even they weren't interesting enough to justify buying the disc.

Blockbuster Video
Guide to Movies & Videos

PUBLISHER: Creative Multimedia
CONTACT: 800-262-7668;
http://www.creativemm.com
PRICE: $19.99 (srp)

Creative Multimedia claims that this disc contains reviews for more than 21,000 movies, bios for 10,000 stars, lectures about great film genres and a trivia quiz. What's not to like? In our opinion, plenty.

The reviews are poorly edited, sometimes rambling on about subjects that have nothing to do with the movie itself. The biographies lack detail—some providing mere filmographies—and some don't even contain a picture of the person. These are bios of movie stars; you'd think they could find a photo.



Angie's relationship to war movies is... beats us.

Most annoying, however, was the disc's poor organization. For example, John Wayne's bio contained a small photo of Wayne and a huge photo of Henry Fonda—and the photo of Fonda covered up significant portions of the text about John Wayne. 'Nuf said.

The Last Words:

Judy: Some bios have photos, some don't. And no birthdate for George Burns? Come on. Buy a paperback guide.

Mark: There was no attribution for the opinions given. It matters a lot whose opinion you're reading. Is it the Blockbuster corporate mentality? Bite me.

Adam: There were 15 screens on what a jerk Woody Allen is—even his personal life gets yanked into the movie review. Bad news: images, text and audio were often mismatched.

Saturday Night Live
Goes Political

PUBLISHER: Berkeley Systems
CONTACT: 510-540-5535;
http://www.berksys.com
PRICE: $29.99 (street)

One funny skit does not a good CD-ROM make.

It's hard to believe, but Saturday Night Live has survived 20 years of dishing up some pretty sketchy sketch comedy. Often times it made us laugh hysterically, but just as often, it made us wonder why. Amazingly, Berkeley Systems manages to create the same effect with this title that is comprised of some 300 video clips taken from the show's archives.

You'll find classic moments: Gilda Radner as Baba Wawa and Dana Carvey as President Bush mouthing off clichés ("Stay the course. A thousand points of light.") during the 1988 elections. You'll also find a do-nothing corkboard with political campaign buttons. By the time you find the clickable buttons, you've lost interest in the simple audio reward, anyway.

To add variety, Berkeley Systems includes four simple arcade-style games which come off as unentertaining as SNL's entire '95 season.

True fans of Saturday Night Live may enjoy this collection of clips, if not for the sheer nostalgia, then for the one or two clips that really make you laugh out loud. Smart fans, however, will simply continue to program their VCRs and tune in to the real thing on Saturday night.

The Last Words:

Judy: The video resolution was really poor. It did, however, give me a flashback insight into an era when Saturday Night Live was doing some groundbreaking work. The jokes still make me laugh.

Mark: There's this great mechanism for providing access to video clips and it's called videotape. The developers really should look into it.

Adam: Anything having to do with Saturday Night Live, I like. The funniest stuff was the newer stuff, with Carvey and Hartman.

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Brisbane Elementary School MacAddicts give their expert opinions on the latest software.

If you've ever had your mom buy you clothes or let your dad command the TV remote, you'll understand when we say that kids and parents don't share the same tastes in... well, just about anything. This, of course, includes computer software.

Which is why we thought it would be ridiculous to have an adult review the latest children's releases when we have an elementary school just down the street from our offices, filled with kids who know what they want. Rest assured that they're no slouches when it comes to using computers—the fourth grade class did, after all, create its final presentations for the quarter in PowerPoint.

Below, you'll see pictures and profiles of our software review board. These are kids who have sacrificed recess, as well as sleep, by coming in before school and sometimes even staying late, all for the sweet satisfaction of finally being able to give adults some advice.

And it's advice that's worth taking seriously. In each review the kids share what they love and what they loathe about the programs, and offer suggestions on software improvements.

Although we provide the plot summaries, the kids decide on the ratings for each piece of software that passes by their desks. If it's true that kids will be kids, this rating is a good indication of whether your children will actually use the software you buy them or let it collect dust like all that exercise equipment you always swore you'd use. Before wasting any more money on useless equipment, read on to see what the kids thought about this month's CD-ROM selection.

Meet the players...

DANIEL LAM, Age 10, Grade 4
EXPERTISE: Math, with a focus on division and multiplication
PICK OF THE MONTH: JumpStart Toddlers

MAGOA ARMAS, Age 11, Grade 5
EXPERTISE: Math
PICK OF THE MONTH: P.A.W.S

CARL LAM, Age 11, Grade 5
EXPERTISE: Math
PICK OF THE MONTH: Elroy Hits the Pavement

ADAM ALLEY, Age 11, Grade 5
EXPERTISE: Reading
PICK OF THE MONTH: P.A.W.S

ROCKSON YAN, Age 11, Grade 5
EXPERTISE: Computers
PICK OF THE MONTH: Elroy Hits the Pavement

ARIELLE REISMAN, Age 10, Grade 5
EXPERTISE: Reading
PICK OF THE MONTH: P.A.W.S

JERAMY ROBISON, Age 10, Grade 4
EXPERTISE: Bumping into walls and falling out of bed
PICK OF THE MONTH: Elroy Hits the Pavement

KRYSTAL WHITE, Age 11, Grade 5
EXPERTISE: Art
PICK OF THE MONTH: Let's Pretend! Space is Our Playground!

Elroy Hits the Pavement

PUBLISHER: Headbone Interactive
CONTACT: 800-267-4709; http://headbone.com
PRICE: $30 (street)

Elroy's back and he is up against some shady characters in the search tor his missing dog, Blue.

Elroy's dog, Blue, disappears and you need to help Elroy track him down by questioning the locals and searching for clues. Beware: you're not the only one after Blue—you have to save him from the dog-napping thugs whose insidious plan involves stealing perfectly normal dogs and replacing them with taco-eating Chihuahuas.

SCOOP FOR GRADES: 3 to 8

LIKES: "It has good graphics, the sound is "perfect" and it's funny!" ▪ Jeramy

"You get to pick the doors where you can find more information about Blue and I thought that was cool." ▪ Rockson

"I liked that I can help Elroy find his dog. Also, I liked the funny pictures in the game that move. Another thing I liked about this game is that every time you play, you can have different ways to win." ▪ Carl

DISLIKES: "I did not like how I could not do very much and it (the game) did it by its self." ▪ Arielle

"The background was good, but I didn't like how the people were drawn." ▪ Rockson

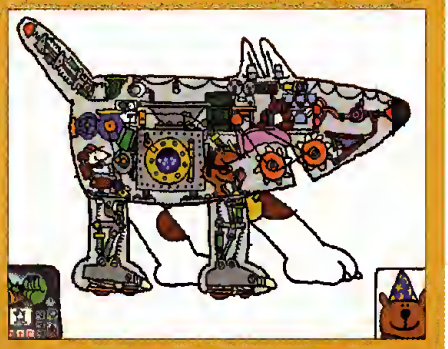
SOUND ADVICE: "This game doesn't need to be improved." ▪ Carl

"I would make more than just one case to solve. I would also make there be more parts that you could play in." ▪ Arielle

FINAL REPORT: Long video clips can leave the kids longing for interaction, but Elroy is so hip it's often worth the watch.

P.A.W.S

PUBLISHER: Digital Garden
CONTACT: 800-221-8180; http://www.vmg.co.uk/paws/
PRICE: $34.95 (street)



P.A.W.S, the Personal Automated Wagging System, lends a new meaning to the phrase "putting on the dog" by showing you the backyard through a dog's eye view. Being the dog that you are, your goals are simply to dig up bones, bark at the mailman and chase cats. Take a peek at a humorous canine cross-section (shown above), letting you witness just what a little Puppy Chow does to a pooch. (P.U.!)

GOOD FOR GRADES: Early grades with help, and 3 to 5 solo

LIKES: "It was fun flying around like an astronaut, and finding clues—just like Sherlock Holmes!" ▪ Jeramy

"I liked how you could fly and chase cats." ▪ Arielle

"I liked the dog's eye view because I can go wherever I want. I also like the part where you deliver bones." ▪ Carl

DISLIKES: "I don't think it's exciting enough for a person to play it all the time and still have fun." ▪ Carl

"It took me a while to find out how to turn it off." ▪ Kystal

SOUND ADVICE: "I would like to have more space and to have a buddy who is a dog and we could talk in dog language." ▪ Adam

FINAL REPORT: A dog's life is just what these kids want, but being the only pup in the litter can get a little boring after awhile.

JumpStart 2nd Grade

PUBLISHER: Knowledge Adventure
CONTACT: 800-542-4240; http://www.adventure.com
PRICE: $35 (street)

You've got to gobble down the even numbers in this fishy math challenge.

When you're in the second grade, mailing letters isn't as simple as running to the post office. Here, when you get a card from your pen pal you have to win the stamps to mail your response. Kids can rack up postage by playing a variety of educational games which cover every school subject from science to sign language. For those who don't feel like writing back they can skip the letter-writing campaign and take an old elevator up to CJ the frog's clubhouse where more adventures await.

GOOD FOR GRADES: 1 to 2

LIKES: "It had a lot for you to do. I worked on it for three hours and still have not finished it." ▪ Kystal

"I liked a lot of stuff in this game. It is my favorite game I've reviewed so far. I give it four stars." ▪ Rockson

DISLIKES: "The computer goes kind of slow and the graphics are not really good, like, make the graphics a little bit 3D." ▪ Daniel

"I would give the game more information, I didn't know what to do in the beginning, that is the only thing that I hated about the games." ▪ Rockson

SOUND ADVICE: "Make the instructions on how to get the points easier." ▪ Kystal

"Make it for older ages to play and the math problems could be harder. Plus, you could walk the stairs instead of going in the elevator." ▪ Daniel

FINAL REPORT: This new system of acquiring stamps is so popular these kids may never pay for postage again.

Let's Pretend! Space is Our Playground!

Publisher: Mind Magic Productions
CONTACT: 800-444-2524; http://www.mindmagic.com
Price: $19.95 (srp)

Explore space as you flit around the solar system with your trusty guide, Flash the Firefly, by clicking your mouse on satellites, asteroids and little, green Martians. Selecting an object shows you its spelling and offers up a cool animation, noise or factoid. Flash can be good for a few juicy space tidbits from time to time as well.

GOOD FOR GRADES: 3 and under

LIKES: "One thing I liked about this was the parody of the movie 2001: Space Odyssey's Dawn of Man. Another thing I liked about this was it was funny and things kept popping up in unexpected places." ▪ Adam

"I liked how it is funny and how the things are bugs." ▪ Arielle

DISLIKES: "I didn't like the fact that it gave very little information on things." ▪ Carl

"At the beginning, I did not like the song." ▪ Rockson

"The only thing I didn't like was that there weren't enough facts about the planets." ▪ Adam

SOUND ADVICE: "There's nothing to improve." ▪ Arielle

"I would label every object so the person who is playing the program has a clue to what will happen if they click on it." ▪ Carl

FINAL REPORT: Perhaps a little skimpy on the facts, but the high fun factor outweighs most complaints.

Take the helm of your very own spaceship in one of many wacky excursions which will take you to the solar system's star attractions.

My First Amazing World Explorer

PUBLISHER: DK Multimedia
CONTACT: 800-356-6575; http://www.dk.com
PRICE: $29.95 (street)

This world tour lacks the real facts.

Prepare your passports for a world tour that starts off in your very own bedroom. Hop on the toy train for the guided tour or click directly on the map to begin your journey across the continents. Along the way, kids sample local flavor through a variety of animations, music samples and educational tidbits. They can also collect stickers for their collections and mail postcards from select locales.

GOOD FOR GRADES: 2 to 5

LIKES: "I liked learning about the different countries and their inhabitants." ▪ Adam

"I like the part on the map when you click on parts of the stuff and it moves." ▪ Rockson

DISLIKES: "I didn't like how the program gave only a little information on the places and things on the screen." ▪ Carl

"I did not like the fact that you did not learn too many things about the country." ▪ Adam

SOUND ADVICE: "I would improve the passport pictures and make it realistic, and I would make it have a goal for children to play." ▪ Rockson

"I would improve it by putting more facts on places and objects in the screen." ▪ Carl

FINAL REPORT: The slick design and clever animations protect a poorly-researched title.

Playtoons Vols. 1-4

PUBLISHER: Sierra On-Line
CONTACT: 800-757-7707; http://www.sierra.com
PRICE: $24.95 each (street)

Each of the Playtoon titles provide sample stories for kids to mimic before letting them go off on their own to create similar cartoon-like tales. Kids pick and choose from pre-designed sets and props, a not-so-eager set of characters and poorly developed story lines.

GOOD FOR GRADES: 3 to 5

LIKES: "I like how you can paste pictures, it is just like flying colors, and I like how the characters move." ▪ Rockson

DISLIKES: "I didn't like the way you can't make people move in your story except for walking and hitting each other." ▪ Carl

"I thought it had a lot of violence in it. I also thought you should be able to make your own characters." ▪ Kystal

"I did not like the fact that there were only eight characters and none of them talked." ▪ Adam

SOUND ADVICE: "I would start at the beginning and make it a different program." ▪ Adam

"I would put more stories or make a longer plot so it's more exciting and funnier." ▪ Carl

FINAL REPORT: Disgusted with the violence and lack of creativity in each of these programs, most kids said they'd rather just rent a movie.

Dull toon tales are pre-packed with gratuitous violence.

JumpStart Toddlers

PUBLISHER: Knowledge Adventure
CONTACT: 800-542-4240; http://www.adventure.com
PRICE: $35 (street)

Mom won't scream about this messy room. Kids click on the clutter littering the playroom floor and they're whisked away to related sites where they learn preschool basics such as counting, sounding out the ABCs and music recognition. Giggles, the gopher that hosts this show, guides toddlers through the seven play areas.

GOOD FOR GRADES: Preschool to kindergarten

LIKES: "I liked the different kinds of animals you can learn and know. I liked the songs in the program." ▪ Carl

"I like everything about this software because, first, you could click on anything or even any animal and it talks, walks or jumps and 'cause it's an educational software." ▪ Magda

DISLIKES: "They (the characters) talked too soft and you had to wait six minutes to load a picture." ▪ Jeramy

"I don't like the little animal that tells us what to do or where to go." ▪ Magda

SOUND ADVICE: "Take that little animal out of there." ▪ Magda

FINAL REPORT: This title may teach your kids to be slobs, but they'll be smart, happy slobs.

Toddlers embark on their adventures from home.

What the Adults Thought

You don't have to be a kid to like kid stuff. While the kids couldn't talk fast enough about how much they hated Playtoons, most of the adults found it charming. To put it in one parent's words, "It was engaging—always something going on, the student gets to do something, not just watch." Funny, but one of the kids' biggest gripes was that it wouldn't let them do enough. They wanted to control what the characters said and did (they are, after all, future adults) as opposed to merely selecting characters and backgrounds and firing up the pre-arranged action sequences.

Amazingly, most of the adults didn't think twice about the cartoon violence in each story. The kids, on the other hand, were appalled. "I didn't like all of the hitting and fighting," one said.

But then, kids have never been the arbiters of good taste. Remember, Barney? Now we've got P.A.W.S, the CD-ROM that all of the kids raved about, while the adults collectively yawned. Sure, it's a cute idea, but we got bored pretty quickly with the bone digging and the cat chasing. We were sure that even the kids would snore.

Of course, the kids loved it. They couldn't get enough of it. They thought it was cool to chase cats, fly (yes, this dog can fly) and pester the mailman. "If you feed the dog, he'll make a farting sound that's really (heh, heh) funny," says one kid.

Which just about says it all.

Great Games Under $35.00

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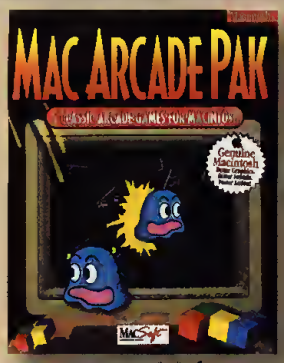
Terminal Velocity is absolutely the most exhilarating flight game available for the Macintosh. It offers fast 3D texture-mapped graphics, full 360-degree flight movement and 7 weapons of extraordinary destruction. Fight your way through 9 unique planets with an awesome array of spectacular air-to-air and air-to-ground combat action.

$34.99

(Requires Power Macintosh. CD-ROM only)



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(CD-ROM only)

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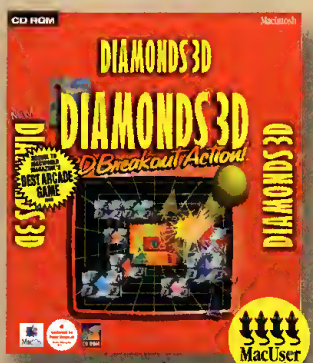
(CD-ROM only)



Diamonds 3D

Breakout in three dimensions! Inside Mac Games calls it "Fun and addictive. The best breakout-style game we've played." The ball doesn't bounce up and down, it comes right at you!

$24.99

(CD-ROM only)

Game Parlor

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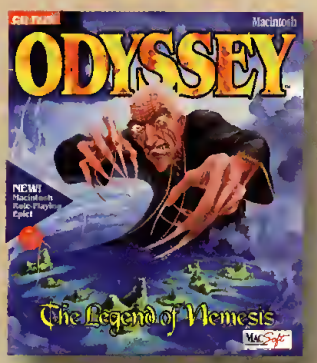

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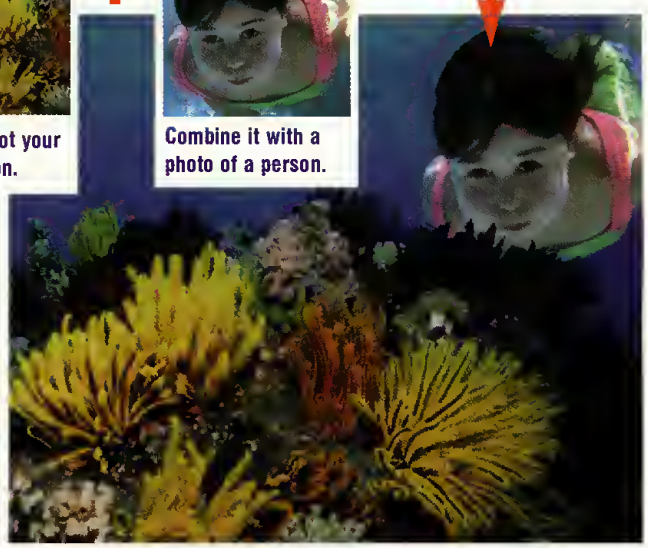
how to fake a photo

Take a dream vacation or meet the President without leaving your desk.

We're all on a budget these days. Travel? Just a trip down to the mall has become something of a luxury since you bought a Power Mac 9500. It's become a choice between taking that dream vacation to Paris, scuba diving along the Great Barrier Reef, gazing at Mount Rushmore or buying groceries for the rest of the year. Here's the good news—with some image editing software, a few digitized pictures and a little ingenuity, you can take a virtual vacation anywhere, with anyone you want.

Take a photo of your dream location.

Combine it with a photo of a person.



The final image of our girl swimming over coral is very realistic... Sure, she can dive to 50 feet without scuba gear. Hey, this is make-believe.

FIND A TRIAL VERSION of Adobe Photoshop and sample images on The Disc in this issue.

Creating a photo that tells little white lies is essentially a high-tech scissors and tape project. You electronically clip images out of one photo and paste them into another, creating a composite picture. Kids, by the way, love to travel electronically. (For more ideas on how to use this technique, see below.)

You'll need to round up a few things before you get started with the electronic knife:

- Images of the people taking the virtual vacation
- Images of the vacation spot
- Image editing software (like Adobe Photoshop or Adobe PhotoDeluxe)
- Access to a scanner or digital images

It's also a good idea to get access to a printer of some sort, either color or black and white to show your photos in a non-electronic format (a virtual vacation photo album, for example). The following steps were carried out in PhotoDeluxe, but they can also be done in other image editing programs, such as Adobe Photoshop. (In fact, we've noted how the process varies in Photoshop in case that's the program you are using.) We've highlighted PhotoDeluxe because it is inexpensive and, unlike Photoshop, can run on a Mac with 8MB of memory. —*David Reynolds*

Five Fun Fake Photo Projects

Creating a virtual vacation is only one of the wacky things you can do with fake photos. Remember when Uncle Ned said that thing at the family reunion that you can't repeat? And how you haven't seen him since? Well, now you can include him in gatherings once again.

Or you can create a whole new life for yourself complete with sports cars and mansions, have famous people show up at your party, create a child's storybook or express latent hostilities. With the fake photo technique, the choice is yours.

1 Indulge your sense of humor with a visit to our national parks.

2 You can get some great effects with clip art and cartoon characters.

3 Our favorite project: putting a friend on the cover of a magazine.

4 Include your ancestors in the family vacation to Washington, D.C.

5 Kids love to help you create story books, especially when it involves their baby photos.

STEP 1 Gather the Travelers

Get the images of the travelers and their destinations into your Mac. If you have access to a scanner, just scan the images in at around 200 dots per inch—anything higher is probably overkill for your printer and will only waste hard drive space. The exception to this is if you want to enlarge a small part of an image, in which case the higher resolution will help when you enlarge it. Once the file is scanned, do any necessary color balancing, sharpening or general clean up on your image (more on these subjects in a later issue), then save it as a TIFF file (or GIF or JPEG file if you plan to put the image on a Web page). Other file formats (such as PICT or EPS) will work fine, but I prefer the clean, controlled bitmap TIFF format for this type of work. Scan in all the people and places you want to use. (See the sidebar "Where To Get Images" for information on what to do if you don't have a scanner.)

Adjust settings during a prescan.

Most scanner software lets you tweak an image before a final scan.

STEP 2 Select Your Traveler

Once your people and places are scanned and ready to go, open the image of your traveler. Then go to the Select menu, and under the Selection Tools submenu, select Polygon. Don't let the term polygon throw you. You'll make a polygon with lots of sides, maybe as many as 200. It's easier to make a more precise selection with the polygon tool than it is with the trace tool. Start clicking around the person to select them. A line will anchor itself at each click point. Every time you click, this line will stick to the tool and anchor at the next click point, so just move the cursor along the edge of your selection and click again. Be careful around the sides of the photograph. If you click off the edge of the photo, the selection will close right then, (there's no way to undo this) and you'll end up with only a portion of what you want. When you are finished making the selection, just double-click the mouse and the selection will close.

In Photoshop, select the Lasso tool from the tool palette. Hold down the Option key while clicking around the image with the Lasso. This is almost the same as using PhotoDeluxe's Polygon selection tool.

You'll need to use the Polygon tool to select the person. Use lots of tiny lines to make detailed selections. Longer selection lines will result in cruder edges. Be careful not to click off the edge of the photo before you are finished selecting.

STEP 3 A Smooth Transition

After you've selected the person, go to the Effects menu and select Feather. Where the dialog box says Feather the edge of the selection, enter a small number, usually under three. Feathering softens the edges of the selection by the number of pixels you enter in the dialog box. Feathering will fuzz the edges of your selection, making the image look more like it belongs in the destination photograph, because the pixels around the edge of the person will mix with the pixels in the destination photo. When you've set the feathering amount, make sure that Delete Background is selected in the lower part of the dialog box, then click OK. The background will disappear, leaving just your selection on the palette.

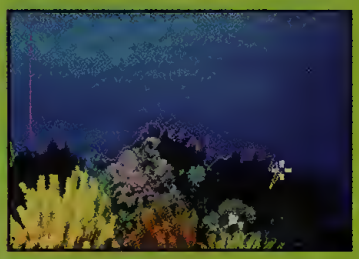
In Photoshop, select Feather from the Select menu. Feathering a selection in Photoshop will not erase the rest of the image.

Set feathering to three or less.

Feathering blends an image's edges with the background.

STEP 4 The Big Move

Now, select Copy from the Edit menu. This places just the selection you've made onto the clipboard. Since PhotoDeluxe only allows one open image at a time, close the picture that you've been working with (if you want to use this image for something else, don't save the changes) and open the location in which you want to place your traveler. The Polygon Selection Tool should still be active. If it isn't, select it. Then define the area to drop your traveler. You'll use the same technique of multiple clicks to define a window where you will paste the image you just copied. It's particularly effective if you put your traveler behind something in the picture. This gives a sense of depth and reality to your image.



"I'd like to be under the sea... " Detine your traveler's aquatic destination.

In Photoshop,

select the area where you want to place the person using the Lasso tool on the tool palette.

STEP 5 Arrival

Once you've selected the place to put the traveler, choose Paste Into from the Edit menu. At this point, the traveler should be in the location. In this case, the selection area shows you where the girl is behind the coral.

The two images are combined, but need editing.

STEP 6 Final Adjustments

Most likely, the scale and placement of the traveler is a bit off. To move your person, click inside the selection and drag to your desired location. To scale them to a realistic size (or unrealistic size, depending on your sense of humor), select Free Resize from the Size menu—where else? Now, just click on one of the four corners of the selection box and drag that box until the person is the right size. Use the Shift key while dragging to keep them proportional (again, depending on sense of humor). Once the person is the right size, move the cursor until it reads OK, then click. PhotoDeluxe will resize the image. Finally, select None from the Select menu. Your first photo should be complete. Now, save the image using the Save As command, or export it using the Export command. This preserves your original image file for later use.

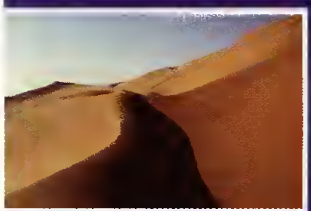
In Photoshop,

to move a person use the, well, Move tool. To resize them, choose Effects from the Image menu and then choose Scale. You'll see a rectangular bounding box; drag the corners to resize the image.

You'll need to make final tweaks to the image before anyone will believe it's real. Most likely, you'll need to adjust the size of the imported image and you may want to move it around a bit for optimum placement.

Where To Get Images

If you have photos of people you'd like to send on a virtual vacation and don't have access to a scanner, take your slides and prints to a photo lab and have the technicians put them on a CD-ROM in Kodak's Photo CD format; you can then easily open the images in your image-editing software. (To find a local photo developer that offers Photo CD service, call 800-939-1302 in the U.S. or 800-465-6325 in Canada.) Alternately, you can take photos of people with a digital camera. Or you can send a roll of traditional film to Seattle Film Works (206-281-1390) for processing. The company will process a 24-exposure roll of film for $13.90, in return sending you a floppy disk with the images, a set of prints and a new roll of film. Seattle Film Works will also put an existing set of 24 prints on disk for $9.95.



Postcards and magazines are good sources of images.

For location photos, you can use stock photos from a CD-ROM. You can purchase CD-ROMs full of such images or, if you've bought the CD-ROM version of PhotoDeluxe or Photoshop, you'll find that stock photography is included. There are some great locations in these images, so go wild. If you have access to a scanner, then magazines such as Life and National Geographic are a great source of locations. As long as the images are scanned for personal, not commercial use you don't have to worry about copyright rules. Some of the government-funded sites on the Internet (try NASA for some really exotic settings) have good material.

You can always obtain stock photos from CD-ROMs.

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how to organize a Web site

Boys & Girls! Learn to create Web pages in your spare time!

So, you shelled out a couple of bills for a fast 28.8Kbps modem, you browsed the World Wide Web until your bloodshot eyes couldn't tell if it was 3:00 a.m. or p.m. and you actually ordered pizza online just like Sandra Bullock did in "The Net". But now you crave more. You want to do more than just watch. And you're starting to think that the title "Web Master" sounds very, very nice.

It's time to jump in feet first, to go public and put your words and pictures—your innermost thoughts and opinions—on the World Wide Web for all sixteen million Internet users to stumble across during an Infoseek search. But how do you get started? Where can you store your home page? Nowadays, most local Internet service providers include, with your account, 2 to 5MB of space on their servers for a non-commercial home page. America Online offers 2MB of space per screen name (keyword: my place). CompuServe will have a Mac version of its home page Wizard later this year.

As for actually building your Web site, if you follow our advice during the next six months, you'll be a certified graduate of MacAddict's Web School. You'll have a knock-'em-dead Web site, be able to talk the talk and be proud to hang our Web School Graduate certificate on your site. Let's get started.

Hot Tip:
If you plan to update your site regularly, then add a What's New space close to the top of your home page. That way, visitors will be able to tell quickly and easily when there's new stuff for them to check out.

STEP 1 Creating the Game Plan

Before you set fingers to keyboard, your first task is to make a plan. The alternative is unthinkable: Once you've created a group of linked pages, changing the name of a page or moving a page into a different folder means you have to change each and every link on each and every page that points to that file. Unless you use a site management tool like Adobe SiteMill, you'll never change the original organization of your site. Now you know why SiteMill sells for $400.

You must first consider content above all else. In a medium where content routinely takes a back seat to flashy multimedia presentation, it's my privilege and duty to remind you that your moral and ethical obligation is to provide genuinely useful blah, blah, blah. Okay. Glad to get that out of the way. You've got content? Fabulous. If you're on a mission from God to create the Internet Registry for Lost Keys, here's your Certificate of High Purpose.

But if you haven't got the slightest idea what to put on your home page, let me say right here and now that there's absolutely nothing wrong with starting out with a picture of your classic VW Beetle, a poem you wrote in ninth grade, an alphabetical list of your CD collection and a page of pointers to your favorite sites. It's a blast to create, you'll feel like a real Internet whiz, you can pass out your URL to your friends and family, and hey!—you're a Web Master, dammit! Let's face it, the Web makes every vanity press look like Farrar, Straus & Giroux; it's the world's most fatuous yearbook. You'll fit right in.

Still, face up to the fact that, until you put up content to draw real visitors, and until you update it regularly to keep them coming back, your pages will remain the Web equivalent of Steve and Eileen's vacation slides.

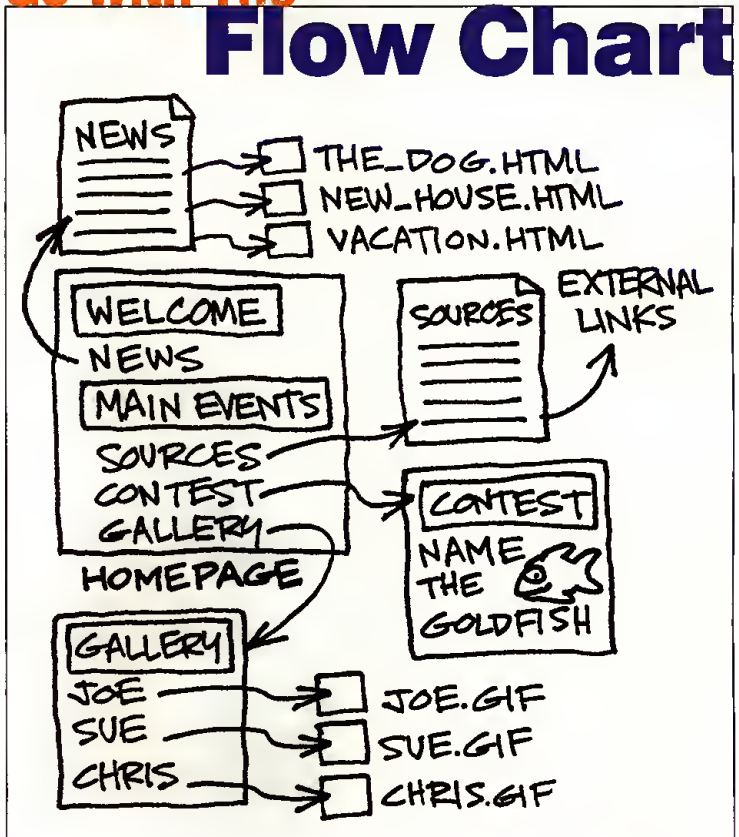
And that's the last I'll say about content.

STEP 2 Go With the Flow Chart

A flow chart is the Web Master's equivalent of a writer's outline—it's your best shot at getting the Big Picture. It sounds about as fun as doing your taxes, but the time invested now will pay for itself later.

This is a job for a pencil and paper—and the bigger the paper, the better. Draw a square in the middle of the sheet for your default page—the first page visitors see—and then draw little arrows whooshing around pointing to your other locally linked pages. Don't bother at first with lots of detail, because you'll be redrawing this diagram many times. Keep lots of blank paper handy. Doodle ideas about graphics. Make it a visual map of your whole Web site. Hey, this is actually fun!

Go With The Flow Chart



Believe it or not, creating a flow chart can be fun. Even better, with careful planning, it will save you tons of time later.

As you create a flow diagram, think hard about how to divide the content into manageable chunks, arranged logically. Your overall organization will will also determine which navigation tools you provide on the pages. A guiding principle: wherever you send your visitors, provide a clear way for them to return. Here are seven helpful hints for designing your Web pages:

- If you plan to cover many different subjects, use your default page as a table of contents to the rest of your site.
- Think of the perfect page as two to four 640 x 480 screens long. Break up longer pages unless the content is one whole piece.
- Reconsider lots of little one-screen pages. It's very frustrating to dig three or four pages deep for information. Search out and kill pages that do nothing more than point to deeper pages. Most information should be no more than two clicks from your default page.
- Although, really large pages are no joy either. The more text and graphics on a single page, the longer it takes for that page to finish loading, and the harder it is to get an overall sense of the content. Be suspicious of pages that are three screens or longer.
- All pages but the default page should contain a Go Home link. Useful as it is, never rely solely on a browser's Back button for this feature—some people will end up on your page from a search engine, and they'll have no way to get to your other pages unless you help.
- For any page longer than a screen or two, provide aids for easy navigation within the page. Create a table of contents at the top linked to logical subsections, and include a Go Back or Back to the Top link within each subsection and at the very bottom.
- Remember that rules were made to be broken, but never arbitrarily.

STEP 3

Directory Assistance

Once your pages and graphics are planned, start thinking about organizing those files on a hard drive, more for your ease of maintenance than anything else. You won't want to put all your Web files on one level, any more than you would want to store all of your data files on the desktop. Any folder organization you devise on your Mac will transfer directly to identically-named "directories" and "subdirectories" on your Unix host. (If you're really lucky, you might find yourself using a Mac-based Web host.)

With FTP access to your Web host, you can create and delete your own directories at will. If you have only shell access, that is, if you can Telnet onto your Web server or log on using a telecom tool like SITComm or Zterm, you can use a few simple Unix commands to make them (we'll tell you how to do this when it's time to actually post your page).

Six Tips For Naming Files

1. Keep page and directory names in lower case for simplicity and consistency.
2. Don't use spaces in titles of documents, files and directories.
3. Instead of using intercaps in file names (MyFirstPoem), divide them with underscores (my_first_poem) for clarity.
4. Keep page and directory names as short as possible without making them totally obscure: "icon_go_home" is better than either "icgb" or "icon_return_to_home_page_top."
5. Use a clear, readable naming scheme for pages, files and directories: "graphics," "news" or "press_releases". Don't forget suffixes such as .html, .gif or .jpg which tell you what type of file you have. You'll learn about these file formats as we go along.
6. If you can't, or don't want to, use directories and must place all of your files on one level, then you should add prefixes to file names to group them by type. Prefix icon names, for example, with "icon" or "ic" so that, when listed alphabetically, all your icons are grouped together: "icon_goback," "icon_shopping," "icon_top," etc.

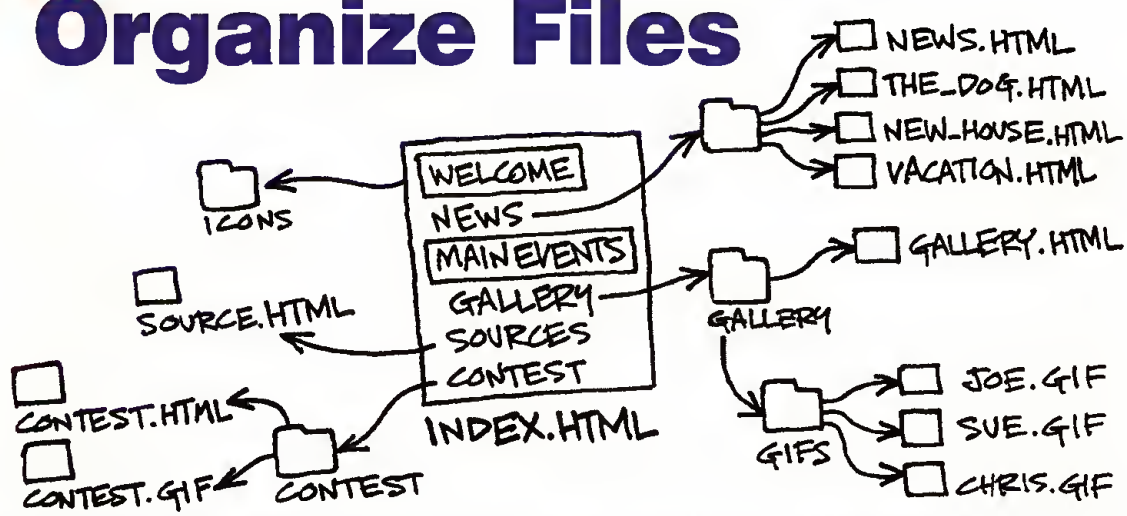
You'll probably want to create a separate directory for graphics and one for sounds. Related pages can be grouped into a directory. When you reach 15 to 25 pages at any level, it's time to divide into subdirectories. On the other hand, don't go more than two subdirectories deep unless you absolutely have to.

Just about now your flow diagram should become incredibly handy.

If your site is going to be heavily oriented toward cutting edge, Netscape-only features, think about keeping a duplicate set of pages which lack tables and other proprietary features. Remember, though, doubling the pages means doubling the maintenance.

Next Month: We'll dump the pen and paper and actually start building all the pages you've drawn. If you already have Adobe PageMill or if you've bought a book on html authoring and have a word processor that supports HTML tags, then you might want to start experimenting on your own. Otherwise, we'll take you through the steps next month and even provide the tools you need on The Disc. *—Joseph O. Holmes*

How To Organize Files



Once you've decided what your Web site will look like, you'll need to figure out how to store your files for easy maintenance. It's best to group files according to type (GIF or HTML, for example) and by location (news or gallery, for example).

how to build a home network

Share a printer, share a modem and play network games.

A while ago, you bought a Mac. Then you bought a printer. And now, you've bought a second Mac. How can you get your two Macs to share the same printer? Short of finding some magic chant in a dusty, old book in your attic, you'll have to build a network.

As daunting as this task may sound, creating a network is amazingly simple and useful, too. With a network, not only can you share a printer, you can also share hard drives, CD-ROM drives and a modem. A network makes attaching a PowerBook to your Mac for file synchronization, printing or CD-ROM drive access easier since you won't need to fuss with the SCSI chain. A network also lets you install software from a newer Macintosh to a Mac with older 800k drives. Of course, the best reason to build a network is to play network games, such as Marathon 2 and FA/18 Hornet against real human opponents.

Hot Tip:

If your printer doesn't show up in the Chooser, make sure you have a terminator at each end of the network chain. Each PhoneNet connector includes a terminator, but they are small and easily lost. If you lose a terminator, you can plug a 120 Ohm resistor across the two outside contacts instead.

Creating a network is simple because AppleTalk—Apple's networking software—is part of the Macintosh System software already installed on your Mac. Unless, that is, you never thought you'd have a network in your house and you removed AppleShare and the Network Control Panel from your System Folder. In that case, dig around for your System software disks. Launch the installer, choose Custom Install, then select Networking Software.

Using AppleTalk, a couple of connectors and some wiring, you can build a basic LocalTalk network that connects two Macs to a printer for around $30. Ethernet, a faster type of network, costs about $300 for the same two-Macs-and-a-printer setup. Here's how to set up a LocalTalk network using PhoneNet connectors.

True Plug 'n Play

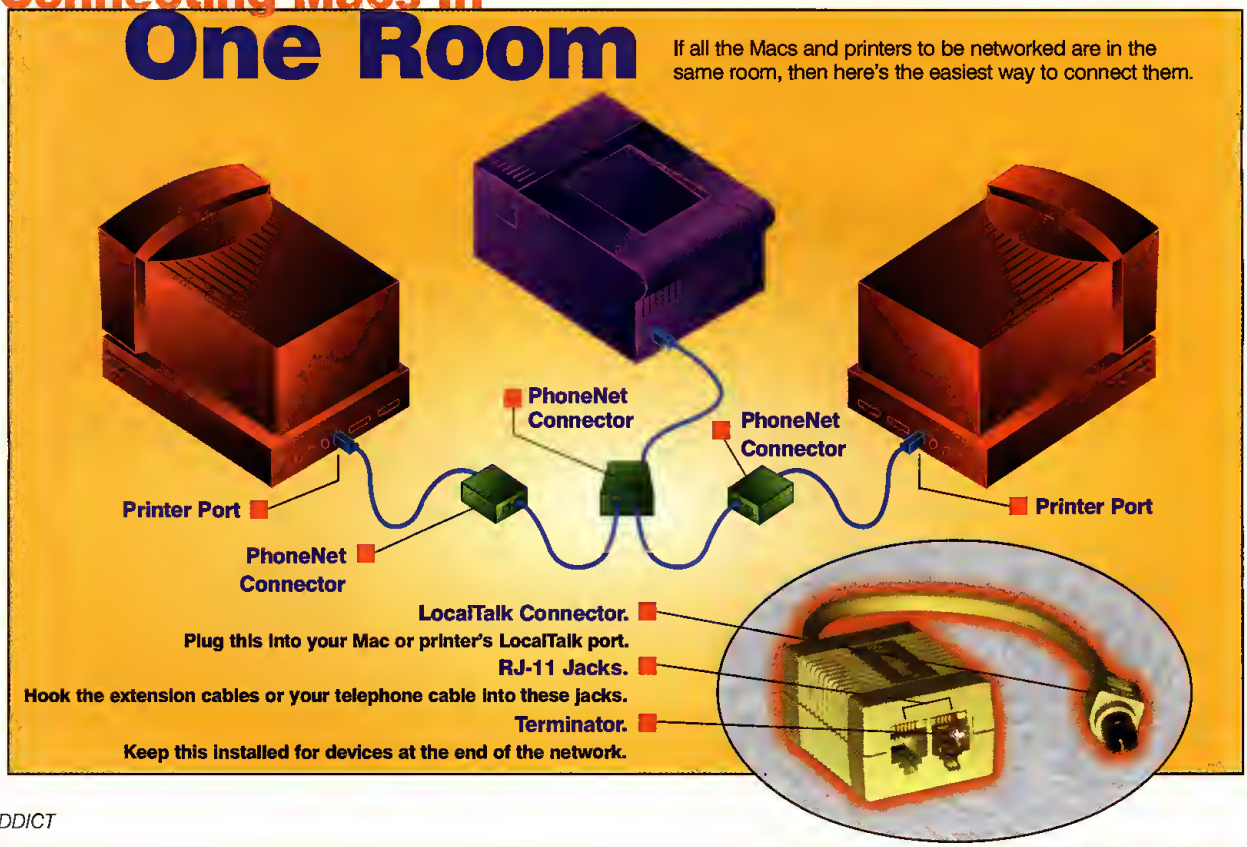
If you've ever plugged a telephone cord into a wall jack, you can connect Macs using PhoneNet connectors. All you need is a connector for each machine and a few extension cables to tie them together (see the diagram below). PhoneNet connectors come with a six-foot extension cable, but for longer stretches you can use regular telephone extension cables.

Each PhoneNet connector comes with a terminator installed in one of the two jacks. (A terminator tells devices where the end of the network is.) To connect devices in the middle of your network (such as the printer in our example), you'll need to remove the terminator; for devices at the end of your network (the Macs in our example), leave the terminator in place. Once you've connected the Macs and the printer, turn on all three devices, select the printer from the Chooser, then print a document. That's it.

There are a few things to keep in mind when sharing a printer. A printer has to be LocalTalk compatible in order to attach directly to the

Connecting Macs In One Room

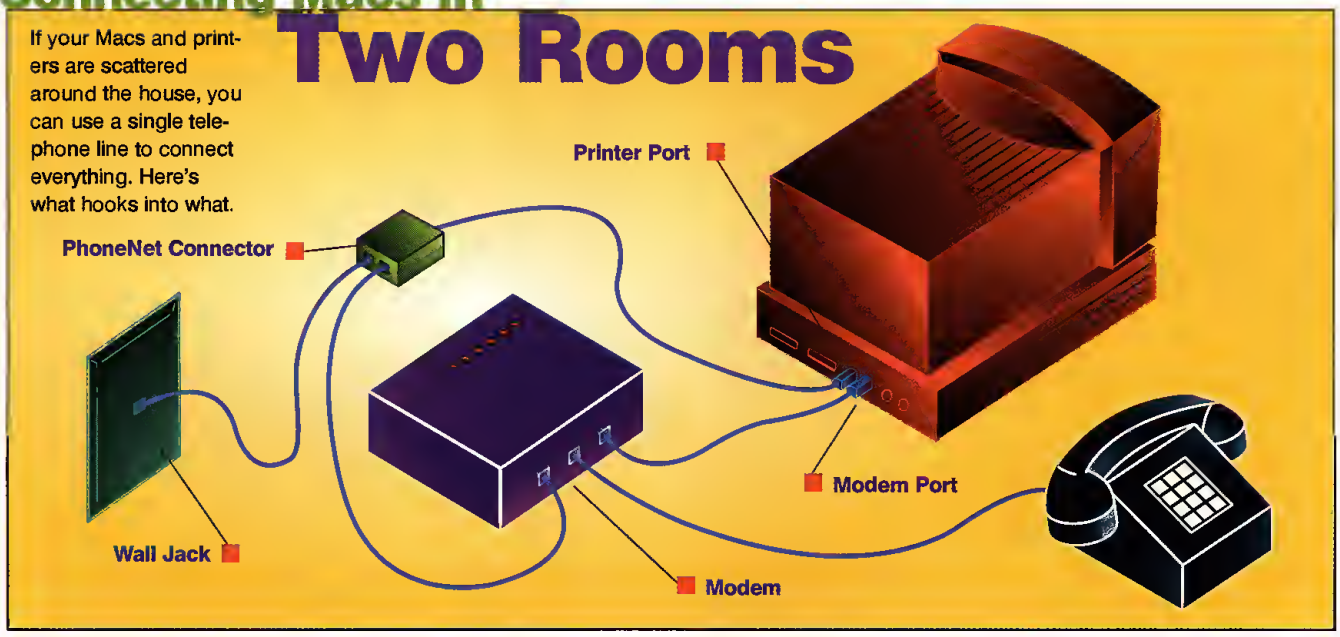
If all the Macs and printers to be networked are in the same room, then here's the easiest way to connect them.



Connecting Macs In

Two Rooms

If your Macs and printers are scattered around the house, you can use a single telephone line to connect everything. Here's what hooks into what.



network. Most Apple LaserWriters are LocalTalk compatible as are HP DeskWriters, but Apple StyleWriters aren't. You can still share a StyleWriter over a network using the GrayShare or ColorShare software that came with the printer. Unfortunately, the desktop Mac attached to the printer bogs down when GrayShare or ColorShare is in use.

Likewise, serial devices (such as modems) can be shared using a software package called PortShare. PortShare makes the shared device appear in the Chooser on each Mac on the network. As with GrayShare, PortShare causes the Mac with the modem attached to slow down.

No Fuss, No Muss Wiring

Wiring a network throughout your house can be tricky. You can run wires along baseboards or under the carpets, but if it isn't done well you'll find yourself booby trapped. Avoid this problem by running a LocalTalk network throughout your house using existing telephone wires. Your phone must use modular (RJ-11) plugs, and you can't do this if you have two telephone lines connected to your house—for instance, if you have a second telephone number just for your modem.

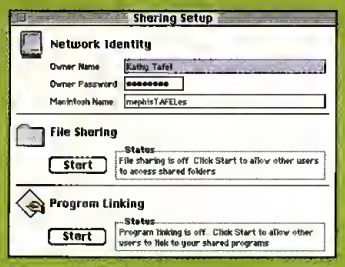
Most household telephone lines contain four wires colored red, green, yellow and black. The red and green wires are used for the primary telephone line, leaving the yellow and black wires available for your network. Even though there's only one plug at each phone jack, a modular duplex jack (Radio Shack part #279-357), also known as a plug splitter, lets you share it with your telephone and your network. If your network doesn't work at first, remove the cover plate on the wall jacks to be sure the yellow and black wires are connected.

A PhoneNet connector can also be used as a plug splitter (see the diagram above). This setup won't let you access your telephone directly through your Mac, but it will let you network computers upstairs with those downstairs without having to run cable. *—John Kiffmeyer*

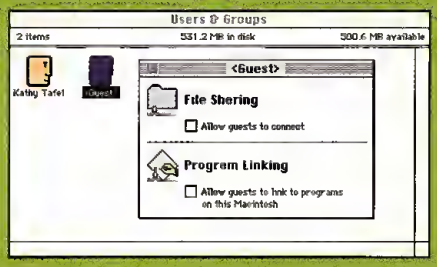
Three Simple Steps For

File Sharing

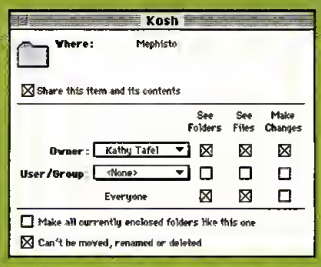
By using file sharing, you can check your e-mail over a LocalTalk network. This is handy if your office is in the basement, but your second Mac is upstairs. Set your e-mail software to retrieve mail automatically, then share the e-mail folder so that you can monitor incoming messages or faxes on your second Mac. However, setting up file sharing isn't as easy as it should be. Apple spread the interface over a bazillion Control Panels and dialog boxes. Okay, maybe only a few, but it's still confusing. Here's what to do.



1 Open the Sharing Setup Control Panel. Be sure to enter a password. Thus preventing family members from doing mean things like hiding all of your documents in the System Folder. The Macintosh name is what others will see in the Chooser. Click the Start button.



2 Open the Users & Groups Control Panel. Open the <Guest> user and allow the guest to connect.



3 Select the folder that you want others to be able to access. Choose Sharing from the File menu. Select your options.

If you run in to trouble:

1. Be sure AppleTalk is on in the Chooser. **2.** Make sure your AppleTalk control panel shows the right information. (Before Open Transport you'd look in the Network control panel.)

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System Requirements: Any PowerPC Macintosh with 16 Mbyte RAM (or more) running System 7.5 and Sound Manager 3.1 (or later). 9600 baud Modem and Internet access (supports serial connection or TCP/IP using optional third party tools). Joystick recommended.

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ask us your questions

We answer all of your technical questions, no matter how simple or complex.

Q Is there anything I can do to speed up my Mac without spending a lot of money?

A Sure! Here are a few often-overlooked simple speedup tips that won't cost you a dime:

1 If your Mac isn't connected to an AppleTalk network, go to the Chooser and select the Inactive radio button. With AppleTalk set to inactive, your Mac won't waste time fruitlessly looking for a non-existent network.

2 In the General Controls control panel, turn Menu Blinking off.

3 In the Keyboard control panel, set the Key Repeat Rate to Fast and the Delay Until Repeat to Short.

4 In the Memory control panel, allocate more memory to the Disk Cache, turn on Modern Memory Manager, turn off Virtual Memory and consider creating a RAM Disk to hold frequently accessed data files, such as Netscape Navigator's caches.

5 In the Monitors and Sound control panels, reduce the Color Depth.

6 In the Mouse control panel, set tracking to Fast.

7 In the Views control panel, make sure the Calculate Folder Sizes checkbox is unmarked.

By themselves, each of these tips won't do much to speed up your Mac, but in aggregate your Mac will be snappier and more responsive.

Q What's the best way to keep track of the serial numbers for my software?

A Lots of commercial programs require you to enter serial numbers during the installation procedure. This isn't a problem during the initial installation since you have the original disk and registration card in front of you (you did, of course, buy your software...). But when you upgrade your Mac or your system software, the program may refuse to run until you re-enter the serial number. Here's what we suggest to easily keep track of serial numbers. Whenever you install a program, create a new folder and use the serial number as its name. Store this folder in the same location as the program so it's readily available. As an added bonus, you may be able to copy the folder name to the clipboard and paste it into the serial number field when required, eliminating the chance of typos.

Q When I'm in Eudora Lite and I copy something (usually a URL), I find that the Clipboard gets erased if I then launch Stickies from the Apple menu and try to paste the URL into a note. I can, however, recopy the URL and paste it into a note after Stickies has been launched. How can I fix this?

A Hey, you're right! In fact, the same thing happens with any application, not just Eudora Lite. Whenever you launch Stickies, it erases the Clipboard. The only solution seems to be to open Stickies first, then cut and paste.

Q I have been trying to use ResEdit to customize a startup screen. However, I am not sure where to find the icon. Should I be using ResEdit to change my startup screen? If so, how do I do it?

TRACK SERIAL numbers using an empty folder.

A One of the little-known features of the Mac is its ability to replace the standard "Welcome to Macintosh" start-up greeting with a custom picture, be it a bathing beauty, corporate logo or warning for others to keep their paws off your Mac. To take advantage of this feature, you first must have a way to save your pictures in the special StartupScreen file format (also known as a PICT resource) required by the Mac.

Way back when the Mac IIfx was king of the hill, the easiest way to save pictures was to go through a clumsy process using Apple's ResEdit utility. Now, most paint programs offer this utility as an option in their Save As menus. Don't worry if your paint program doesn't have such an option. It surely saves in standard PICT format and Chris Derossi's freeware program PICT2Startup easily converts images from the common PICT format into the more esoteric StartupScreen format. Once your image is in the correct format, make sure you name it StartupScreen, then drop it into your System Folder and restart.

THE SHAREWARE mentioned and System 7.5 Update 2.0 are included on The Disc in this issue.

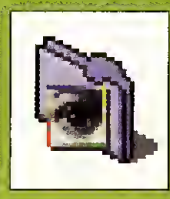
Q What's the most trouble-free way to upgrade to System 7.5.3?

A Theoretically, you should be able to pop in the System 7.5 Update 2.0 CD-ROM (or floppy 1 of 14), double-click the Installer, and away you go. But many users have reported problems with this approach—for example, the Installer doesn't properly delete old versions of new extensions and it doesn't correctly move third-party control panels to the correct place when it has finished. It takes a little more time, but I suggest the following course of action:

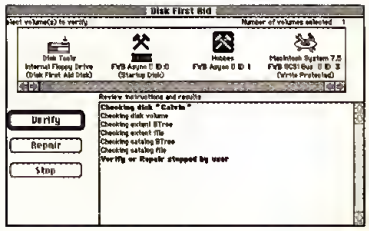
1 Run Apple's Disk First Aid utility. First, start your Mac using the Disk

Tips Desktop Customization

Want to pep up your folder icons? Try Greg Robbins' Folder Icon Maker, a free utility that lets you replace plain folders and disk icons with wacky ones boasting unique icons. Just find an application or document with an icon you want to use, then drag it on top of Folder Icon Maker. When you release the mouse, Folder Icon Maker creates a new folder (or disk, depending on the template) with a small icon in the middle. Yes folks, it really is that easy. And if you use the program in the normal menu mode, you can change the default folder color as well as choose the anti-aliasing option to make the small icons look as good as possible. Folder Icon Maker requires the operation of System 7.0 or later.



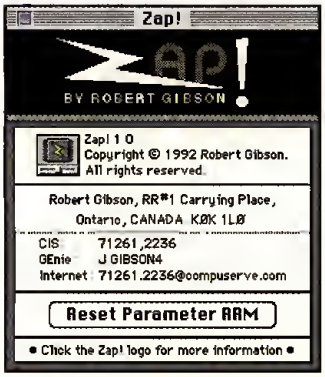
Tools floppy disk provided with most Macs. Launch the Disk First Aid utility, select your startup disk, and then click Repair, which verifies the integrity of the volume and attempts to repair any damage found. If Disk First Aid can't fix a problem, I recommend using a third-party package such as Symantec's Norton Utilities.



APPLE'S DISK FIRST AID can do a lot more than you've been led to believe.

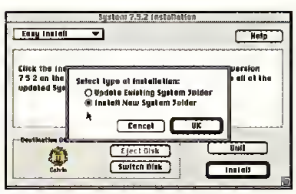
2 Rebuild your desktop. Your desktop is an invisible file that keeps track of all the files on your hard drive. The standard way to rebuild your desktop is to hold down the Command-Option keys while starting up your Mac. However, if the desktop file was corrupted, the new desktop file is likely to have problems, too. That's why I prefer to use Lloyd L. Chambers' freeware extension, Desktop Reset, which deletes the old desktop file and then builds a new one from scratch.

3 Update your SCSI drivers. Return to the Disk Tools floppy disk and launch Apple HD SC Setup. Select your startup disk, then click Update to rewrite the SCSI drivers (if you formatted your drive with a third-party program such as FWB's Hard Disk Toolkit, get the most current version and use that instead of Apple HD SC Setup). If you're really serious about starting with a clean slate, you might want to make a backup and then reformat your hard drive rather than simply updating the drivers.



ZAP! resets your Mac's PRAM without forcing you to restart.

4 Zap your parameter RAM. Still with me? The parameter RAM (PRAM) stores certain preference settings when your Mac is turned off. Sometimes the data in the PRAM becomes corrupted, causing hard-to-trace problems. Zap PRAM by holding down the Command-Option-P-R keys while starting up your Mac. Alternately, you can use Zap!, Robert Gibson's freeware control panel that resets the PRAM without requiring you to remember a key combination or restart your Mac. Zapping PRAM resets a lot of control panels to their default values, so you'll want to confirm the settings of the following after installing System 7.5.3: AppleTalk, Chooser, Date & Time, General Controls, Keyboard, Memory, Monitors & Sound, Mouse, Startup Disk and Views.



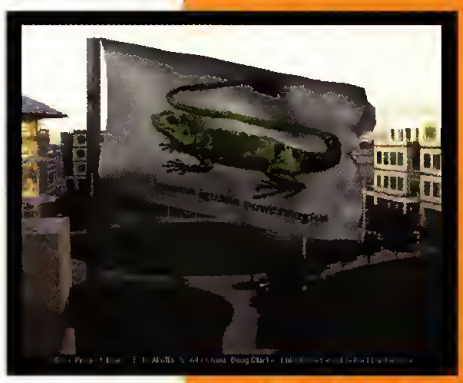
A HIDDEN "clean install" option lets you start from scratch when installing a system.

5 Perform a "clean install" of System 7.5.x. The finish line is in sight. Run the installer for your current version of System 7.5. (That's right, you're going to reinstall it.) After you click Continue to dismiss the splash screen, press Command-Shift-K to access the hidden "clean install" option. Select Install New System Folder and click OK. Instead of attempting to update the files in your current System Folder, the installer renames the folder Previous System Folder and starts from scratch.

6 Run the installer on the System 7.5 Update 2.0 disk. When the installer finishes bringing you up to System 7.5.3, manually go through the previous System Folder and transfer necessary items to the new System Folder. It's best to transfer items one at a time to ensure that everything works with the updated operating system.

Find the System 7.5 Easter Egg

If you're running any variant of System 7.5, check this one out. Launch SimpleText or choose Note Pad from the Apple menu (or open any other Drag Manager-enabled word processor) and type "secret about box." Select the text and drag it to the Finder's desktop. Out pops a simple Breakout-style game with the names of the System 7.5 team appearing in the bricks. When the ball drops, use the mouse to move your paddle so that the ball bounces towards the bricks and destroys them. If you miss the ball, don't worry; you get as many as you need. When all of the bricks are gone, a new batch appears. When this simple game grows tiresome, click the mouse button to close the window. This works only with System 7.5, not 7.5.1 or later.



WE HAVE NO IDEA why Apple engineers chose an iguana, but its still fun to find it.

If you are running System 7.5.2 or later, instead of a Breakout game, the screen is filled with a color photograph of Apple's R&D center at 1 Infinite Loop in Cupertino. Programmer credits scroll below the scene and in the foreground is a flag with a large green iguana and the slogan, "iguana iguana powersurgius."

You can control the flag's waves with the mouse, and can even snap the flag off the pole and watch it flutter to the ground by rapidly moving the mouse back and forth just right (it's not easy, but it can be done). Click anywhere to return things to normal.

There are a few special options in this Easter Egg. While you are dragging the phrase "secret about box" to the desktop, press and hold the P key to replace the iguana flag with one that depicts the System 7.5.2 programming team or, if you are running System 7.5.3, the Mac OS logo. Likewise, press and hold Q while dragging the phrase to see a pink flag and blank background with the message "QuickTime required for images". This is what you would see if you accessed this Easter Egg without QuickTime installed.

Dwen W. Linzmayer (71333.3152@CompuServe.com) is a San Francisco-based freelance writer and the author of "The Mac Bathroom Reader." Please submit technical questions or helpful tips directly via e-mail or c/o MacAddict, 150 North Hill Drive, Brisbane, CA 94005.

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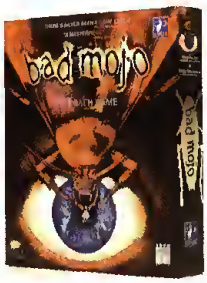

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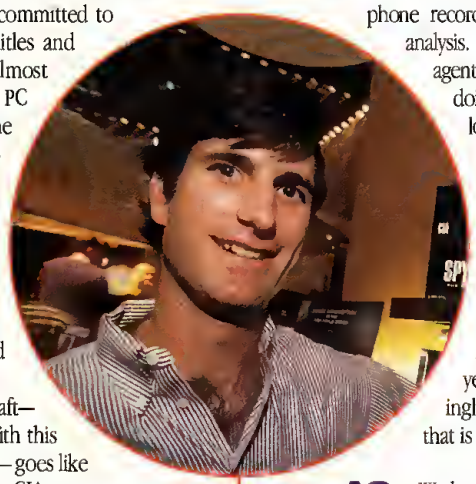
powerplay

Spies, Mafia and the Web

Behind the scenes of Spycraft

Activision is one of several companies that's refocusing its attention on the Mac gaming market. In the past, Activision has generally released Macintosh versions of their popular PC titles, but the Mac releases lagged several months behind the PC releases. Now realizing the Mac platform's status as a wide-open market for quality games, Activision is committed to publishing more Mac titles and to publishing them almost concurrently with the PC versions. Spycraft: The Great Game is the company's first game to be released on this year's aggressive schedule. Zork Nemesis, MechWarrior 2, The Elk Moon Murder and Muppet Treasure Island should ship by fall.



The plot for Spycraft—designed to coincide with this year's Russian elections—goes like this: as an agent for the CIA, you must prevent the assassination of the U.S. President as he travels to Russia. Further complicating your mission, the top Russian presidential candidate has been assassinated. Covert operations specialist James Adams wrote a realistic script using the expertise of former CIA Director William Colby and former KGB Major General Oleg Kalugin.

In addition to this rich plot, Spycraft seamlessly mixes together 35mm film, digital video, music, voice-overs, sound effects, text and photographs. The effects aren't just eye candy—the use of each medium is integral to the story and gameplay. For example, you must analyze audio clips to identify an informants' whereabouts by stripping out background noises. These game puzzles take place on your Personal Information Manager (PIM) or on the computer in your "office." Your PIM also handles all voice and e-mail.

Spycraft is also one of the first games to bundle a national Internet Service Provider's installer. Why? The game includes an online element; adding current events, related Web sites and e-mail to gameplay. This is not gratuitous exploitation of the current Internet hoopla. Spycraft is about being a spy—gathering intelligence—and using all available methods to succeed.

Unlike many adventure games where the plots sometimes seem like no more than backdrops to clever puzzles, Spycraft's plot actually relates to the games' challenges. You must wade through a lot of extraneous information to get the nuggets you need—just like a real intelligence agent would. Most of the puzzles are associated with finding information, whether through retouching a photo, accessing phone records or performing sound analysis. If this is what our CIA agents really spend their time doing, then they deserve a lot more of our respect.

Andrew Goldman, the game's producer, oversaw the creative direction of the game.

MA: You started developing Spycraft more than two years ago, yet the plot seems amazingly accurate for a game that is based on current events.

AG: We had a great team of experts. William Colby, Oleg Kalugin and James Adams all have an incredible sense of what's going on. The rise of the Russian Mafia naturally pointed [the game's development] in that direction. With the privatization of the Russian economy, the Mafia ended up with control of the communal resources and set up money laundering schemes. At the same time, the Russian security infrastructure broke down. Currently, the FBI is working with Russia to control organized crime.

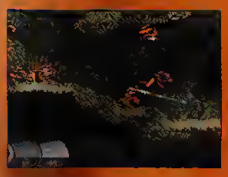
> **"From the beginning, we were committed to not using the right mouse button."**

MA: The World Wide Web was not ubiquitous in early 1994, as it is now. At what point did you decide to include online information?

AG: I came to Activision in 1994 from Prodigy, where I developed a clear sense of where [online services] were leading. There were obvious com-

Teasers

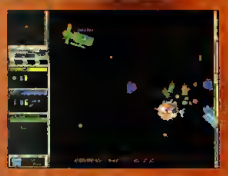
Vendors are such teases. They get us worked up about a new game and then tell us that it won't be ready until Christmas ('97 or '98, that is). Here then are the must-have games that should ship in July or August.



Abuse

PUBLISHER: Bungie
CONTACT: 800-295-0060; http://www.bungie.com

Use napalm bombs, nova spheres and the death saber to lay waste to computer enemies or up to seven of your (formerly) close friends in this side-scrolling shoot-'em-up. Not only do you get to kill people while utilizing all 360 degrees of motion, but there's a level editor that you can use to create traps that speed your friends' demise.



Ares

PUBLISHER: Changeling
CONTACT: 800-769-2768; http://www.changeling.com

As in many space operas, your mission is to save humanity from invading aliens. Unlike other games, you'll need to mix diplomacy and fighting skills to achieve various goals. Instead of turn-based play, everything happens in real-time. Watch your back as you scheme against the evil Cantharans.

Bedlam

PUBLISHER: GT Interactive Software
CONTACT: 800-305-3390; http://www.gtinteractive.com

If you've played Loaded on a Sony PlayStation and enjoyed it, then you'll love playing Bedlam on your Mac. After loading up your characters with ammo, you'll go on about 25 missions, blowing up everything in sight. But this isn't merely a side-scroller—you get to blow up things on multiple levels in three dimensions and you control three different people at once (until they die off, that is).

"People saw the rise of the Russian mafia and pointed us in that direction."

"There are only a few instances where we used blue screens."

"We are still learning how to create an experience with the richness of text."

pelling online possibilities. We actually wanted to do more—the goal was to have the online components completely integrated within the game, but the technology just wasn't there yet. We wanted to bring a social element to the game. Adventure games are solitary; with a social forum online, you can debate the moral choices involved with espionage or develop different strategies.

MA: The game obviously caters to readers of spy thrillers. How did you create a compelling plot that would have large audience appeal?

AG: Two years of a lot of pain. From the beginning, we focused on strategy and also tried to get the level of detail that exists in a novel. You have to be into reading to get everything out of this game, since it relies on the Web and the PIM.

MA: The quality of the acting and of the video sequences seems to be higher than in other titles in the genre. How did you achieve this?

AG: We got better performances by shooting the film cost-effectively. We didn't use a lot of special effects, and most of it was shot on sets that we built. There are only a few instances where we used blue screens—the Red square scene and the outside shots. We used both film and video, the larger images are film, and the clips in the PIM are video. You get better quality with film. Normal video is 60 fields and is "interlaced"—which means you see every other line. Video works by flashing the odd and even fields really quickly. Film is like negatives—one image makes up the whole picture. A computer display works in the same way that film does, in a "non-interlaced" format. So, by shooting everything in film, we were able to keep the same format throughout the entire production process.

MA: Spycraft is obviously not just a port of the Windows version.

AG: From the beginning we were committed to not using the right mouse button—Spycraft was designed to be cross platform. A lot of our designers are Mac users. We got the video into the computer using Macs and most of the art and animations were done on the Mac, too. The interface is more like a hybrid of the Mac OS and Windows 95. It's hard to test simultaneously, so the Mac version was released about three weeks after Windows.

MA: Text adventures seem richer than their current multimedia counterparts. Without the monetary constraints of shooting film, text adventures can explore offshoots that never reach the "real" conclusion. Given multimedia's production expenses, how do you decide where to stop exploration?

AG: Just as there was a transition as books were translated into movies, the same thing is happening with text adventures. We are still learning how to create an experience that has the richness of text, and Spycraft taught us a lot. I'd like to have the same budget, same scenario and start over again—do everything one more time using what we've learned. There will be another Spycraft story-based game with greater online evolution.

MA: If you could change one thing...

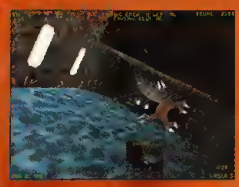
AG: The game is controlled through fuzzy logic, meaning it plays differently each time through. Some parts won't show up, others appear in a different order. This put our test department through a stressful period. I would like to have expanded the scope of the fuzzy logic and focused more on the online section. —*Kathy Tafel*

SPOILER:

Stuck retouching a photo? Think about perspective and lighting and which items are appropriate.

more Teasers

Descent II



PUBLISHER: MacPlay
CONTACT: 800-4MACPLAY; http://www.macplay.com

Hold on to your stomach. Descent II brings you even more nausea-inducing action than the original program did. In this new version, a trusty Guide-bot aids you in your mission to exterminate alien robots by scouting ahead in the maze to find enemies and bonuses. Also new is a Thief-bot which steals your weapons and powerups.

Marathon Infinity

PUBLISHER: Bungie
CONTACT: 800-295-0060; http://www.bungie.com

Amid the slams for developing a Win 95 version of Marathon, Bungie produced another episode in the Marathon series. Infinity continues the Marathon saga, explaining mysteries from the first two games. Also included is a strategy guide and a map editor that lets you extend the Marathon universe forever.

MechWarrior 2

PUBLISHER: Activision
CONTACT: 800-477-3650; http://www.activision.com

Are you sensing a trend in these games yet? Here's another blow-'em-up, blast-'em-away game for the late summer. Set in the 31st century, MechWarrior 2 puts you at the helm of a seven-story, walking war machine. Blow up computer enemies or networked opponents as you defend the honor of your clan with plasma blasters, lasers and rockets.

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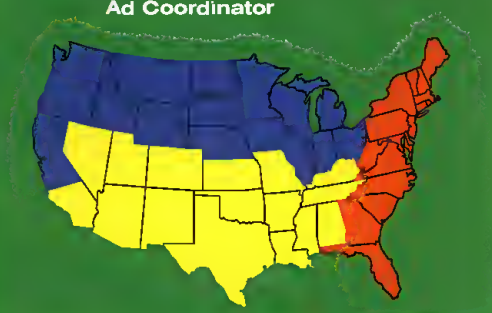

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The product locater is also on The Disc & The Web Site.

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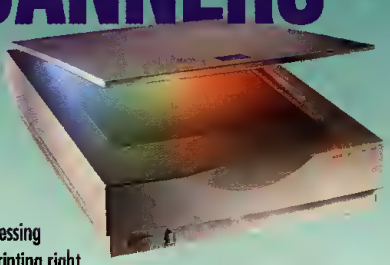

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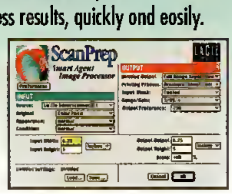

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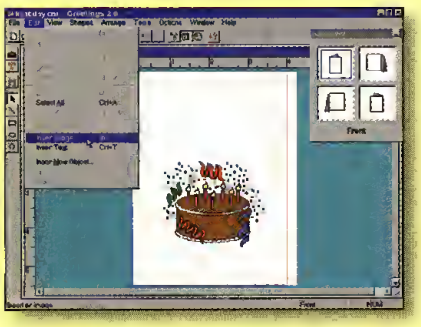

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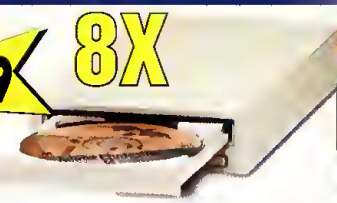

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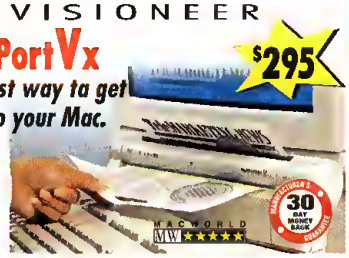

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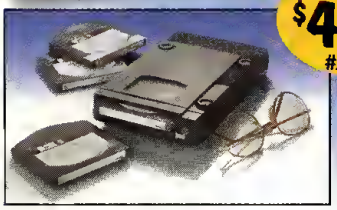

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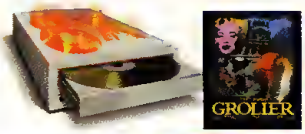

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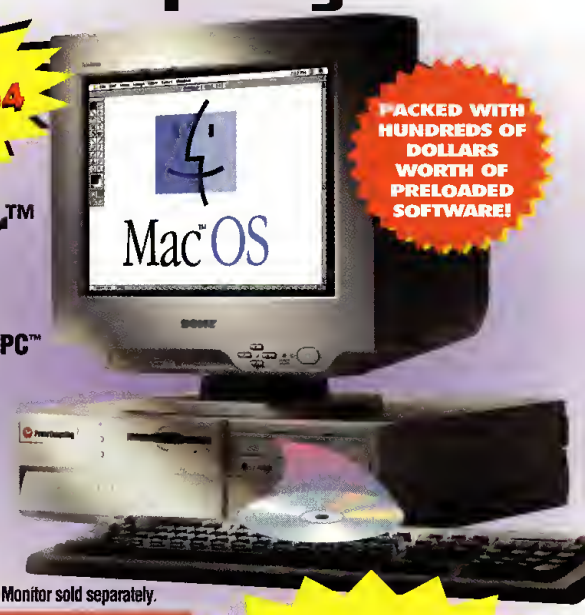

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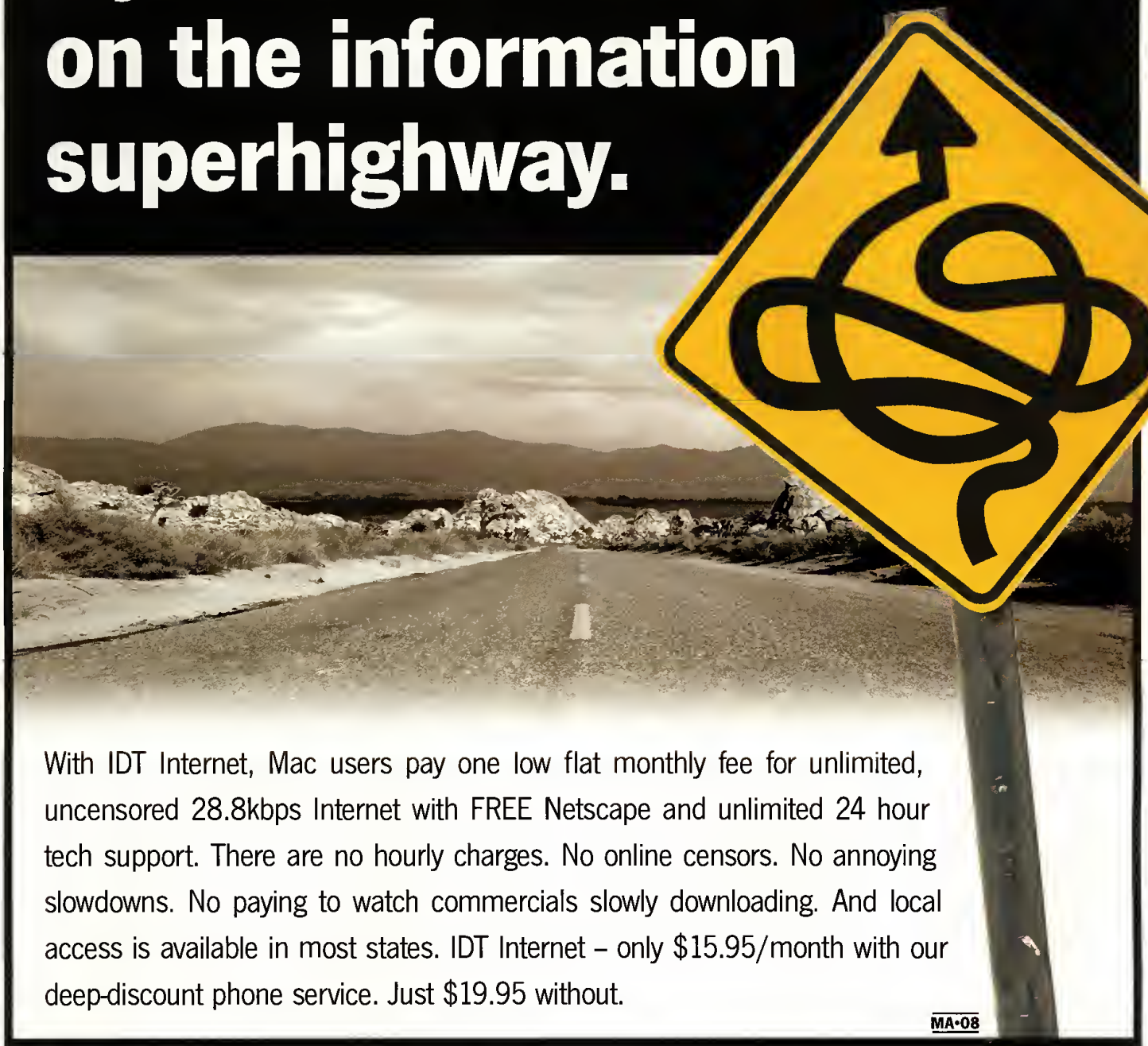

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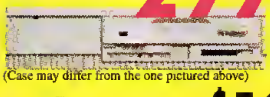

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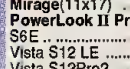

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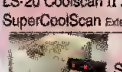

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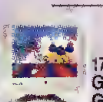

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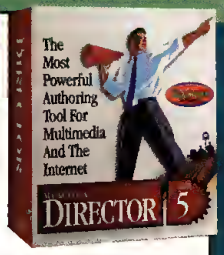

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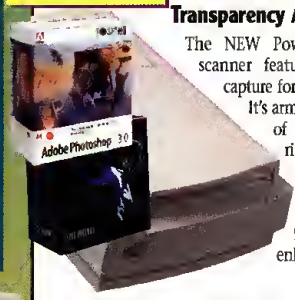

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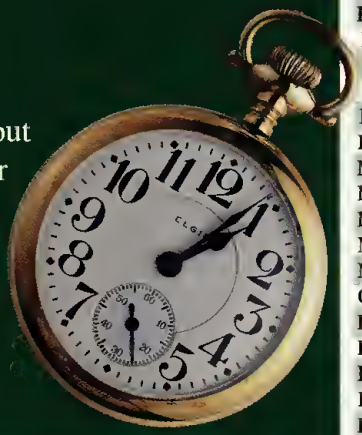

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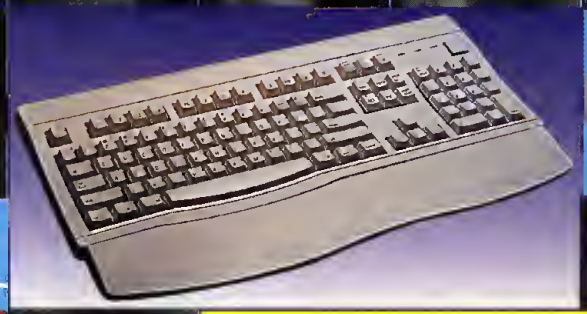

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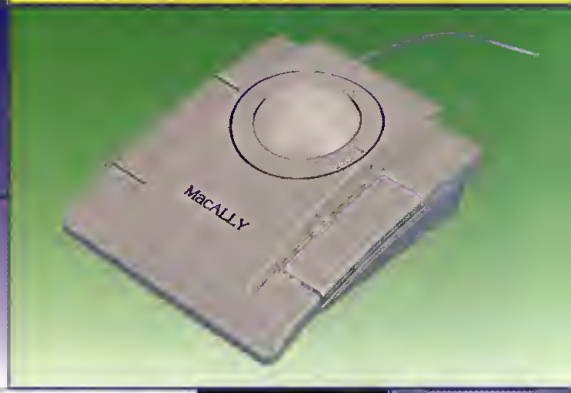

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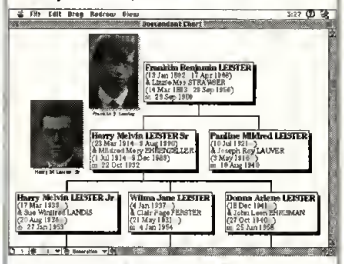

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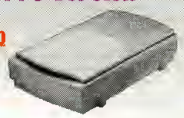

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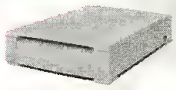

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—Erik Wright
2. The last good thing written in "C" was Franz Schubert's "Ninth Symphony"
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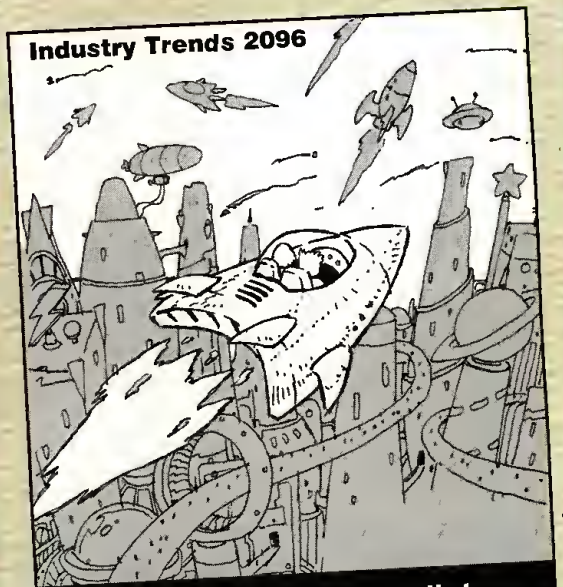
3. "Hello, my name is Mark, and I've been Intel-free for eight years and two days."
—Mark Hartman
4. (: If Apple were to disappear, where would Bill Gates get his ideas? :)
—Joshua Graessley

...and I quote...

"Thanks to Apple Computers it's Bitchin what these things can do."—TORI AMOS, notes, "Under the Pink", Atlantic.

"Our musicians love their Macs so much, they almost think of them as another brand of guitar," Reprise Records president HOWIE KLEIN told Rolling Stone.

"We said we'd invent the future and we did. But we got there and we didn't have a plan." GIL AMELIO, Apple Chairman and CEO, at an employee meeting in March 1996.



"Gee, Marge, it says here that Apple Computer is doomed!"

by Mark Simmons

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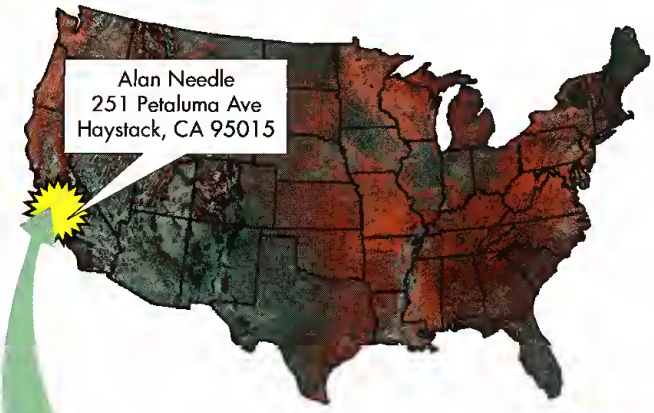

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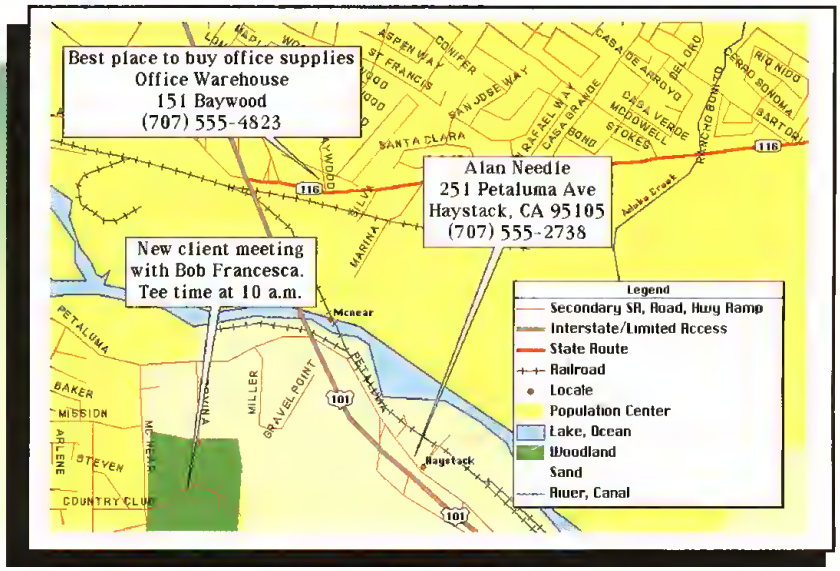

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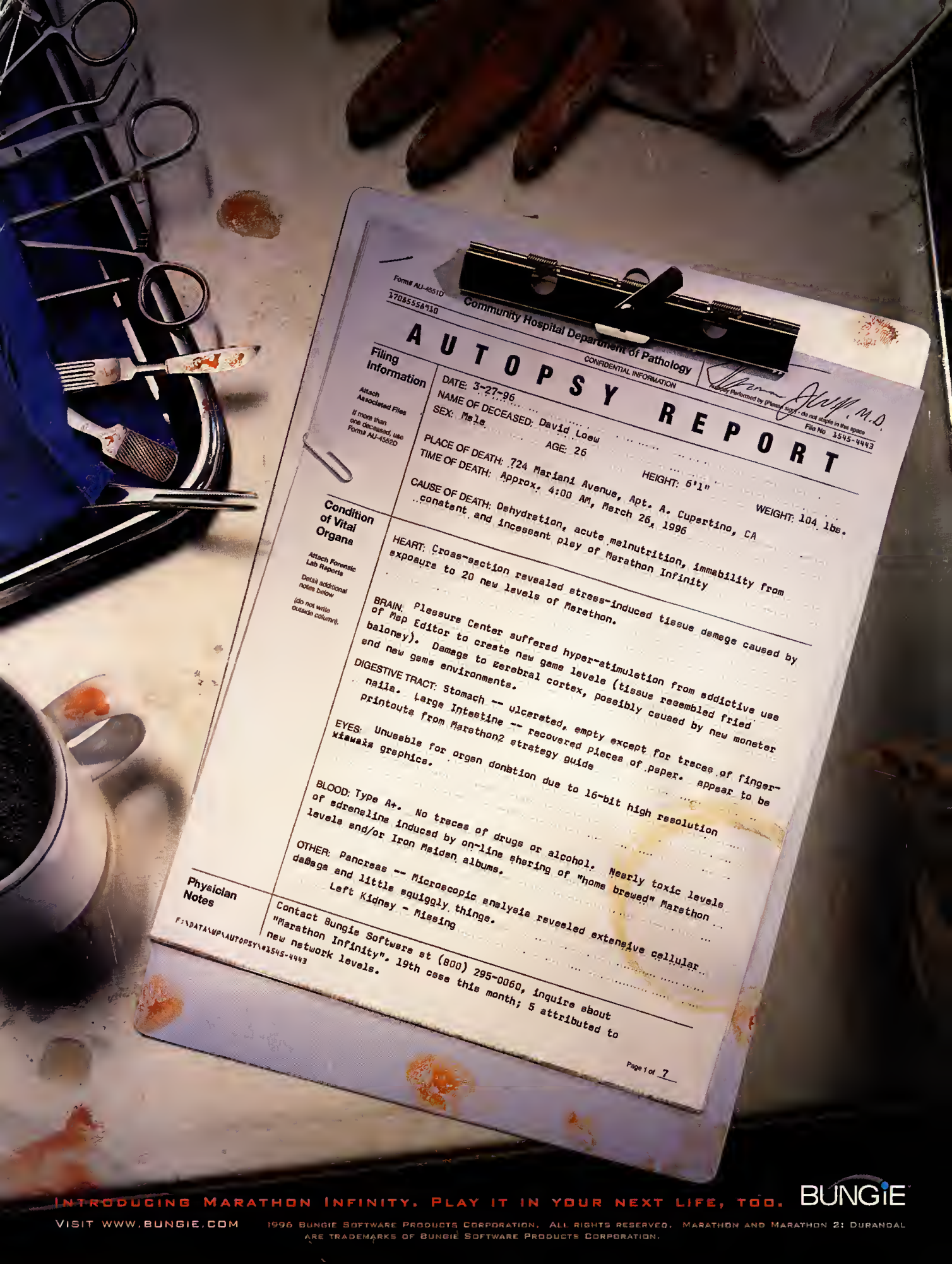

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